MHC-MG110/MG310AV

SERVICE MANUAL

Ver 1.2 2002.05

US Model
Canadian Model
MHC-MG110/MG310AV
Mexican Model
MHC-MG110
Australian Model
MHC-MG310AV

- MHC-MG110/MG310AV are composed of following models.
  As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME

	MHC-MG110	MHC-MG310AV
COMPACT DISC DECK RECEIVER SYSTEM	HCD-MG110	HCD-MG310AV
FRONT SPEAKER	SS-MG110	SS-MG510AV
CENTER SPEAKER		SS-CT360
REAR SPEAKER		SS-RS360

SPECIFICATIONS

Power requirements
North American model: 120 V AC,60 Hz
Australian model: 220 – 240 V AC, 50/60 Hz

Power consumption
North American model
MHC-MG310AV: 200 watts
MHC-MG110: 150 watts
Australian model
MHC-MG310AV: 200 watts

Dimensions (w/h/d) incl. projecting parts and controls
Approx. 280 × 383 × 480 mm

Mass
MHC-MG310AV: Approx. 11.3 kg
MHC-MG110: Approx. 10.9 kg

Supplied accessories:
Remote commander (1)
Batteries (2)
AM loop antenna (1)
FM lead antenna (1)
Rear speaker cords (MHC-MG310AV only) (2)
Center speaker pads (attached to the backside of the center speaker) (MHC-MG310AV only) (2)
Video cable (Australian model only) (1)

Design and specifications are subject to change without notice.

PARTS LIST

Part No.	Description	Remark
1-476-631-11	REMOTE COMMANDER (RM-SMG5AV) (MG310AV)	
1-476-632-11	REMOTE COMMANDER (RM-SMG1) (MG110)	
1-501-659-71	ANTENNA (FM) (MG110/MG310AV: US, Canadian)	
1-754-060-11	ANTENNA (FM) (Australian)	
1-754-102-21	ANTENNA, LOOP (LW.MW)	
1-769-433-11	CORD, SPEAKER (10m) (for SS-RS360)	
1-823-258-11	CORD, CONNECTION (VIDEO CABLE) (Australian)	
4-228-953-01	COVER, BATTERY (for RM-SMG1/SMG5AV)	
4-233-902-12	MANUAL, INSTRUCTION (ENGLISH)	
4-233-902-22	MANUAL, INSTRUCTION (FRENCH) (Canadian)	
4-233-902-31	MANUAL, INSTRUCTION (SPANISH) (Mexican)	

MINI Hi-Fi COMPONENT SYSTEM

9-873-800-13
2002E0500-1
© 2002.05
Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.03	New
1.1	2001.05	Addition of Canadian model (MHC-MG110/MG310AV) and Australian model (MHC-MG310AV)
1.2	2002.05	Addition of Mexican model (MHC-MG110) (ENG-02011)

HCD-MG110/MG310AV

SERVICE MANUAL

Ver 1.1 2001.06

US Model
Canadian Model
HCD-MG110/MG310AV
Australian Model
HCD-MG310AV

Photo: HCD-MG110

HCD-MG110/MG310AV are the Amplifier, CD player, Tape Deck and Tuner section in MHC-MG110/MG310AV.

HCD-MG310AV only

This stereo system is equipped with the Dolby* Pro Logic Surround decoder.

* Manufactured under license from Dolby Laboratories. ÒDolbyÓ ÒPro LogicÓ and the double-D symbol □□ are trademarks of Dolby Laboratories. Confidential unpublished works. 1992-1997 Dolby Laboratories. All rights reserved.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM64-K1BD44A
	Base Unit Name	BU-K1BD44A
	Optical Pick-up Name	KSM-213BFN
TAPE Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	CM8L6Z511A

SPECIFICATIONS

Amplifier section

U.S.A. models:

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

with 8 ohm loads both channels driven, from 120 – 10,000 Hz; rated 75 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

HCD-MG310AV

Front speaker:
Continuous RMS power output: 75 + 75 watts (8 ohms at 1 kHz, 10% THD)
Total harmonic distortion: less than 0.09% (8 ohms at 1 kHz, 40 watts)

Center speaker:
Continuous RMS power output: 25 watts (8 ohms at 1 kHz, 10% THD)

Rear speaker:
Continuous RMS power output: 25 + 25 watts (8 ohms at 1 kHz, 10% THD)

HCD-MG110

Continuous RMS power output: 75 + 75 watts (8 ohms at 1 kHz, 10% THD)
Total harmonic distortion: less than 0.09% (8 ohms at 1 kHz, 40 watts)

Inputs
VIDEO/MD IN (phono jacks): voltage 250 mV/450 mV, impedance 47 kilohms
5.1CH (HCD-MG310AV only):
FRONT (phono jacks): voltage 450 mV, impedance 47 kilohms
REAR (phono jacks): voltage 450 mV, impedance 47 kilohms
CENTER (phono jack): voltage 450 mV, impedance 47 kilohms
SUB WOOFER (phono jack): voltage 450 mV, impedance 47 kilohms

Outputs
PHONES (stereo phone jack): accepts headphones of 8 ohms or more
FRONT SPEAKER: accepts impedance of 8 to 16 ohms (except for the North American model)
SURROUND SPEAKER REAR (HCD-MG310AV only): accepts impedance of 8 to 16 ohms (except for the North American model)
SURROUND SPEAKER CENTER (HCD-MG310AV only): accepts impedance of 8 ohms (except for the North American model)
SUB WOOFER (HCD-MG310AV only): voltage 1 V, impedance 1 kilohm

CD player section

System: Compact disc and digital audio system
Laser: Semiconductor laser (λ = 780 nm) Emission duration: continuous
Frequency response: 2 Hz – 20 kHz (±0.5 dB)
Wavelength: 780 – 790 nm
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB
OPTICAL OUT (CD) (Square optical connector jack, rear panel)
Wavelength: 660 nm
Output Level: –18 dBm

– Continued on next page –

COMPACT DISC DECK RECEIVER

9-873-801-12
2001F0500-1
© 2001.6

Sony Corporation
Home Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

Tape player section

Recording system: 4-track 2-channel stereo
Frequency response: 40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range: 87.5 – 108.0 MHz
Antenna: FM lead antenna
Antenna terminals
North American model: 75 ohms unbalanced
Australian model: 75 ohms balanced
Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range
North American model: 530 – 1,710 kHz (with the interval set at 10 kHz)
531 – 1,710 kHz (with the interval set at 9 kHz)
Australian model: 531 – 1,602 kHz (with the interval set at 9 kHz)
Antenna: AM loop antenna
Antenna terminals: External antenna terminal
Intermediate frequency: 450 kHz

General

Power requirements
North American model: 120 V AC, 60 Hz
Australian model: 220 – 240 V AC, 50/60 Hz

Power consumption
North American model
HCD-MG310AV: 200 watts
HCD-MG110: 150 watts
Australian model
HCD-MG310AV: 200 watts

Dimensions (w/h/d) incl. projecting parts and controls: Approx. 280 × 383 × 480 mm
Mass
HCD-MG310AV: Approx. 11.3 kg
HCD-MG110: Approx. 10.9 kg

Design and specifications are subject to change without notice.

TABLE OF CONTENTS

1. SERVICING NOTE 4

2. GENERAL 5

3. DISASSEMBLY
3-1. Disassembly Flow 7
3-2. Upper Cover 8
3-3. Front Block Assy 8
3-4. MAIN Board 9
3-5. Back Panel, DC Fan (M391) (Australian model) 9
3-6. MAIN AMP Board, POWER Board 10
3-7. Middle (F) Assy, Bracket (Middle-R), Power Bracket 10
3-8. Mechanism Deck (CDM64-K1BD44A) 11
3-9. Base Unit (BU-K1BD44A) 11
3-10. BU Holder Assy 12
3-11. Motor Gear Assy (Sled) (M102), CD Board 12
3-12. Op Base Assy (KSM-213BFN) 13
3-13. Cassette Lid Assy (A)/(B) 13
3-14. Mech Deck (TAPE) 14

4. TEST MODE 15

5. MECHANICAL ADJUSTMENTS 16

6. ELECTRICAL ADJUSTMENTS
Deck Section 16
CD Section 18

7. DIAGRAMS
7-1. Block Diagram – CD SERVO Section – 21
7-2. Block Diagram – TUNER/TAPE DECK Section – 22
7-3. Block Diagram – SURROUND Section – 23
7-4. Block Diagram – AMP Section – 24
7-5. Block Diagram – DISPLAY/POWER SUPPLY Section – 25
7-6. Note for Printed Wiring Boards and Schematic Diagrams 26
7-7. Schematic Diagram – CD Section – 28
7-8. Printed Wiring Board – CD Section – 29
7-9. Printed Wiring Boards – CD MOTOR/SENSOR Section – 30
7-10. Schematic Diagram – CD MOTOR/SENSOR Section – 31
7-11. Printed Wiring Board – TC Section – 32
7-12. Schematic Diagram – TC Section – 33
7-13. Schematic Diagram – MAIN Section (1/4) – 34
7-14. Schematic Diagram – MAIN Section (2/4) – 35
7-15. Schematic Diagram – MAIN Section (3/4) – 36
7-16. Schematic Diagram – MAIN Section (4/4) – 37
7-17. Printed Wiring Board – MAIN Section – 38
7-18. Printed Wiring Boards – AMP Section – 40
7-19. Schematic Diagram – AMP Section – 41
7-20. Printed Wiring Boards – DISPLAY Section – 42
7-21. Schematic Diagram – DISPLAY Section – 43
7-22. Printed Wiring Board – CONTROL Section – 44
7-23. Schematic Diagram – CONTROL Section – 45
7-24. Printed Wiring Boards – POWER Section – 46
7-25. Schematic Diagram – POWER Section – 47
7-26. IC Pin Function Description 48

8. EXPLODED VIEWS
8-1. General Section 54
8-2. Front Panel Section 55
8-3. Chassis Section 56
8-4. Mechanism Deck Section (CDM64-K1BD44A) 57
8-5. Base Unit Section (BU-K1BD44A) 58

9. ELECTRICAL PARTS LIST 59

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

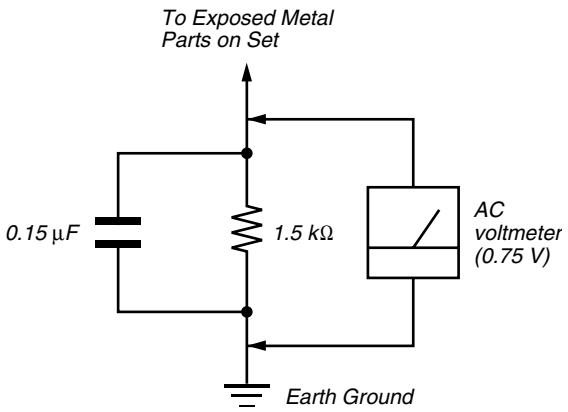


Fig. A. Using an AC voltmeter to check AC leakage.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveforms is output three times.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICING NOTES

CD-TEXT TEST DISC

This unit is able to display the test data (character information) written in the CD on its fluorescent indicator tube.
The CD-TEXT TEST DISC (TGCS-313:4-989-366-01) is used for checking the display.
To check, perform the following procedure.

Checking Method:

1. Press the I/⏻ button to turn the power on, set the disc to the disc table with the "test disc" label facing up, and chuck the disc.
2. Press the CD button to set CD function, and press the ◄► button to playback the disc.
3. The following will be displayed on the liquid crystal display.
   Display : 1KHZ/0DB/L R
4. Pressing the –I◄◄ or ►►I+ button, select the track. The text data of each track will be displayed.
   For details of the displayed contents for each track, refer to "Table 1: CD-TEXT TEST DISC TEXT Data Contents".

Restrictions in CD-TEXT Display

In this unit, some special characters will not be displayed properly. These will be displayed as a space or a character resembling it.

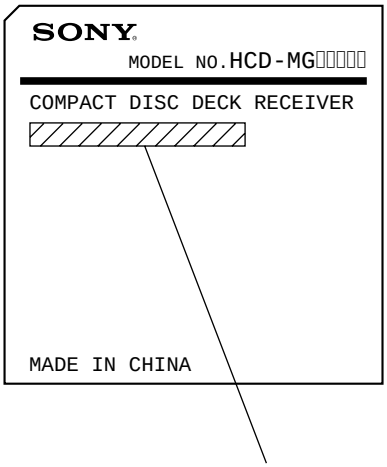
Table 1: CD-TEXT TEST DISC TEXT Data Contents (TRACKS No. 1 to 20:Normal Characters)

TRACK No.	Displayed Contents
1	1kHz/0dB/L&R
2	20Hz/0dB/L&R
3	40Hz/0dB/L&R
4	100Hz/0dB/L&R
5	200Hz/0dB/L&R
6	500Hz/0dB/L&R
7	1kHz/0dB/L&R
8	5kHz/0dB/L&R
9	7kHz/0dB/L&R
10	10kHz/0dB/L&R
11	16kHz/0dB/L&R
12	18kHz/0dB/L&R
13	20kHz/0dB/L&R
14	1kHz/0dB/L&R
15	1kHz/–1dB/L&R
16	1kHz/–3dB/L&R
17	1kHz/–6dB/L&R
18	1kHz/–10dB/L&R
19	1kHz/–20dB/L&R
20	1kHz/–60dB/L&R

Note: Track No. 21 to 99 are not displayed.

MODEL IDENTIFICATION

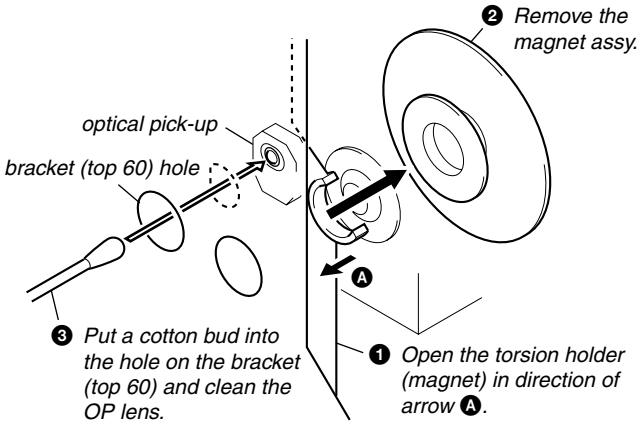
– REAR VIEW –



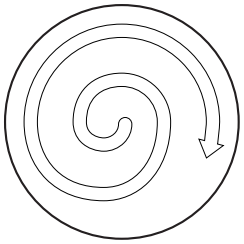
US, Canadian models: AC: 120V 60Hz
Australian Model: AC: 220–240V〜50/60Hz

CLEANING OBJECTIVE LENS OF OPTICAL PICK-UP

• In cleaning the objective lens of optical pick-up, be sure the following below.


❷ Remove the magnet assy.
optical pick-up
bracket (top 60) hole
Ⓐ
❸ Put a cotton bud into the hole on the bracket (top 60) and clean the OP lens.
❶ Open the torsion holder (magnet) in direction of arrow Ⓐ.

Note 1. In cleaning the lens, do not apply an excessive force.
As the optical pick-up is vulnerable, application of excessive force could damage the lens holder.
Note 2. In cleaning, do not use a cleaner other than exclusive cleaning liquid (KK-91 or isopropyl alcohol).
Note 3. Wipe the objective lens spirally from center toward outside. (See Figure A)



(Figure A)

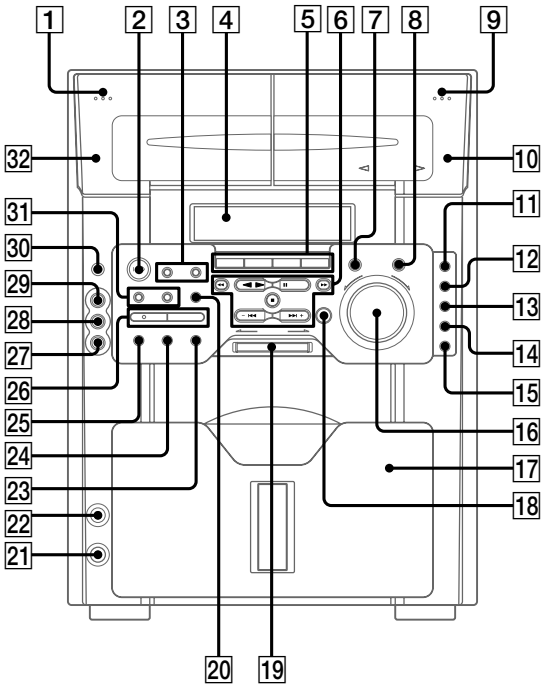
This section is extracted from instruction manual.

SECTION 2
GENERAL

Parts Identification

The items are arranged in alphabetical order.
Refer to the pages indicated in parentheses ( ) for details.

Main unit



5.1CH/VIDEO (MD)* 5 (28)
AUDIO IN L jack 28 (29)
AUDIO IN R jack 27 (29)
CD 5 (14, 21)
CD SYNCHRO 26 (21, 22)
CLEAR 20 (15, 19, 34)
Deck A 32 (20)
Deck B 10 (20)
DIRECTION 31 (20)
DISC ACCESS 19 (12, 21)
Display window 4
DISPLAY 23 (12, 17, 19, 34)
ENTER 18 (11, 15, 18, 22, 26, 28)
FRONT* 13 (25)
GAME 30 (26, 29)
KEYBOARD INPUT jack 22 (27)
LINK* 15 (25)
MENU 31 (16, 18)
PHONES jack 21
PLAY MODE 24 (14, 22)
PRESET EQ 7 (24)
PRO LOGIC* 12 (11, 25)
PUSH OPEN (Front cover) 17 (12)
REAR* 14 (25)
REC PAUSE/START 26 (21,22)
REPEAT 25 (14)
STEREO/MONO 25 (19)
SURROUND* 11 (25)
SURROUND MODE 8 (25)
TAPE A/B 5 (20)
TIMER SELECT 3 (23, 27)
TIMER SET 3 (11, 23, 26)
TUNER/BAND 5 (18)
VIDEO IN jack 29 (29)
VIDEO (MD)** 5 (28)
VOLUME control 16

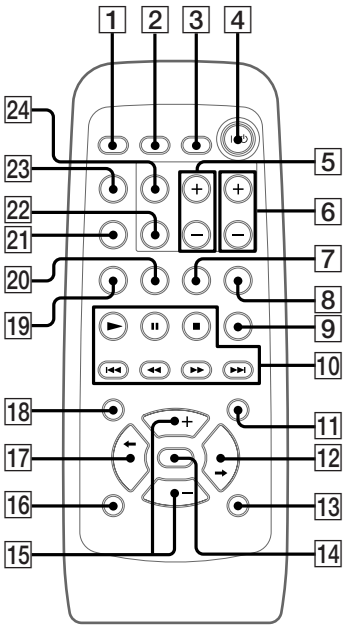
BUTTON DESCRIPTIONS

⏏ (deck A) 1
I/⏻ (power) 2
◄◄ (rewind) 6
◄ ► (play) 6
II PAUSE 6
►► (fast forward) 6
■ (stop) 6
I◄◄ (go back) 6
►►I + (go forward) 6
⏏ (deck B) 9

* HCD-MG310AV only
** HCD-MG110 only

Remote Control

For HCD-MG310AV

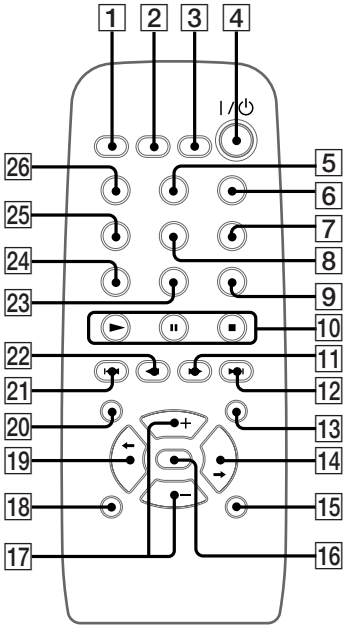


5.1CH 21 (30)
CD 19 (14, 21)
CENTER +/– 5 (11)
DBFB 13 (24)
DISPLAY 9 (12, 17, 19)
GAME 8 (26, 29)
GROOVE 14 (24)
PLAY MODE 2 (14, 22)
PRESET EQ 18 (24)
PRO LOGIC 24 (11, 25)
REAR +/– 6 (11)
REPEAT 3 (14)
SCROLL 11 (17)
SLEEP 1 (26)
SURROUND 16 (25)
TAPE A/B 20 (20)
TEST TONE 22 (11)
TUNER/BAND 7 (18)
VIDEO (MD) 23 (28)
VOL +/– 15

BUTTON DESCRIPTIONS

I/⏻ (power) 4
► (play) 10
❚❚ (pause) 10
■ (stop) 10
I◄◄ (go back) 10
◄◄ (rewind) 10
►► (fast forward) 10
►►I (go forward) 10
←DISC/DISC→ 12 17

For HCD-MG110



CD 24 (14, 21)
CLOCK/TIMER SELECT 2 (23, 27)
CLOCK/TIMER SET 3 (23, 26)
DBFB 15 (24)
DISPLAY 26 (12, 17, 19)
ENTER 5 (11, 15, 18, 22, 26, 28, 34)
GAME 7 (26, 29)
GROOVE 16 (24)
PLAY MODE 25 (14, 22)
PRESET EQ 20 (24)
REPEAT 8 (14)
SCROLL 13 (17)
SLEEP 1 (26)
SURROUND 18 (25)
TAPE A/B 23 (20)
TUNER/BAND 9 (18)
VIDEO (MD) 6 (28)
VOL +/– 17

BUTTON DESCRIPTIONS

I/⏻ (power) 4
► (play) 10
❚❚ (pause) 10
■ (stop) 10
I◄◄ (go back) 21
◄◄ (rewind) 22
►► (fast forward) 11
►►I (go forward) 12
←DISC/DISC→ 14 19

Setting the time

1 Turn on the system.

2 Press TIMER SET.

When you set the clock for the first time, go to step 5.

3 Press –I◄◄ or ►►I + repeatedly to select ÒCLOCK SETÓ

4 Press ENTER.

5 Press –I◄◄ or ►►I + repeatedly to set the hour.

6 Press ENTER.

7 Press –I◄◄ or ►►I + repeatedly to set the minute.

8 Press ENTER.

Tip

If you made a mistake or want to change the time, start over from step 1.

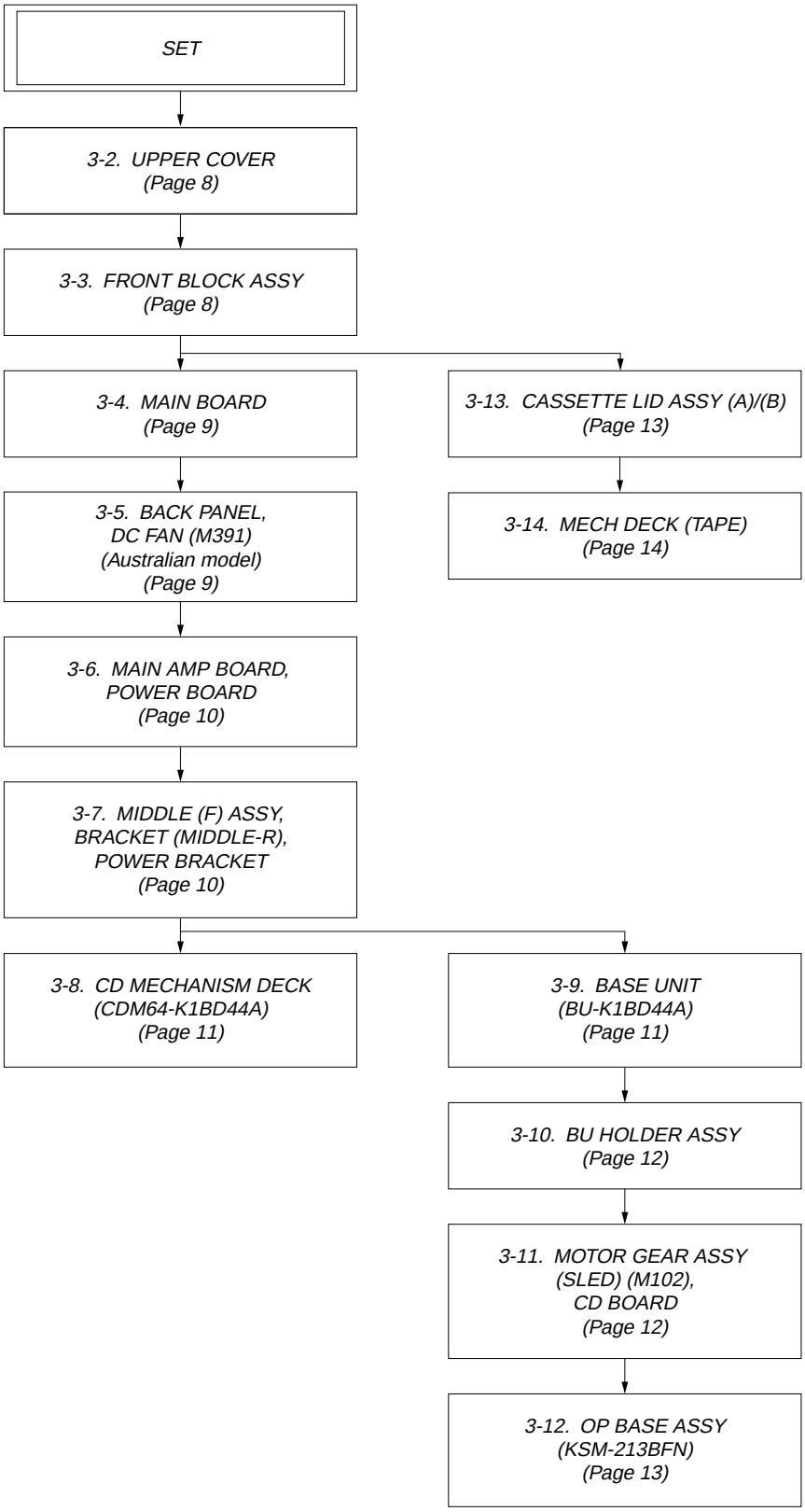
Note

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

SECTION 3
DISASSEMBLY

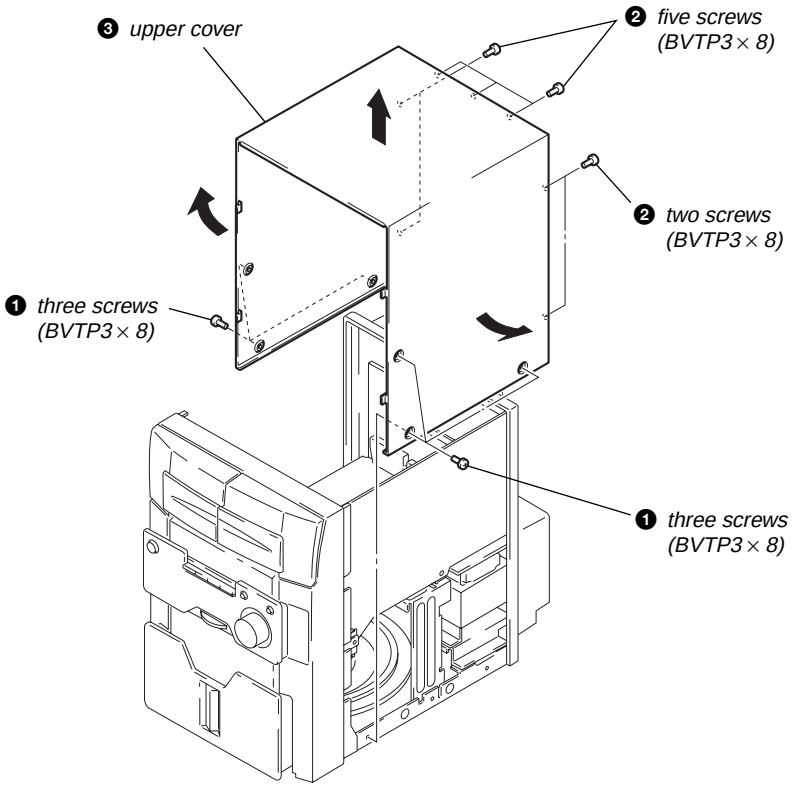
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

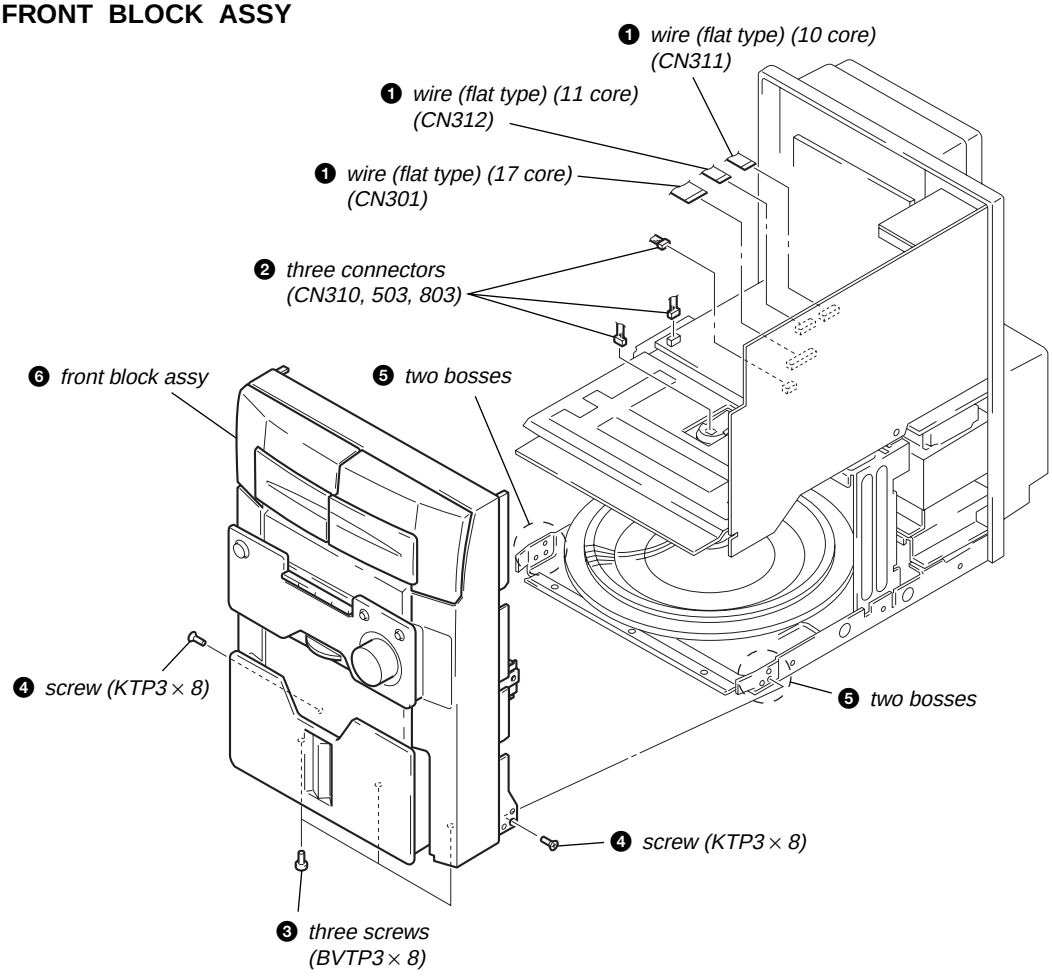


Note: Follow the disassembly procedure in the numerical order given.

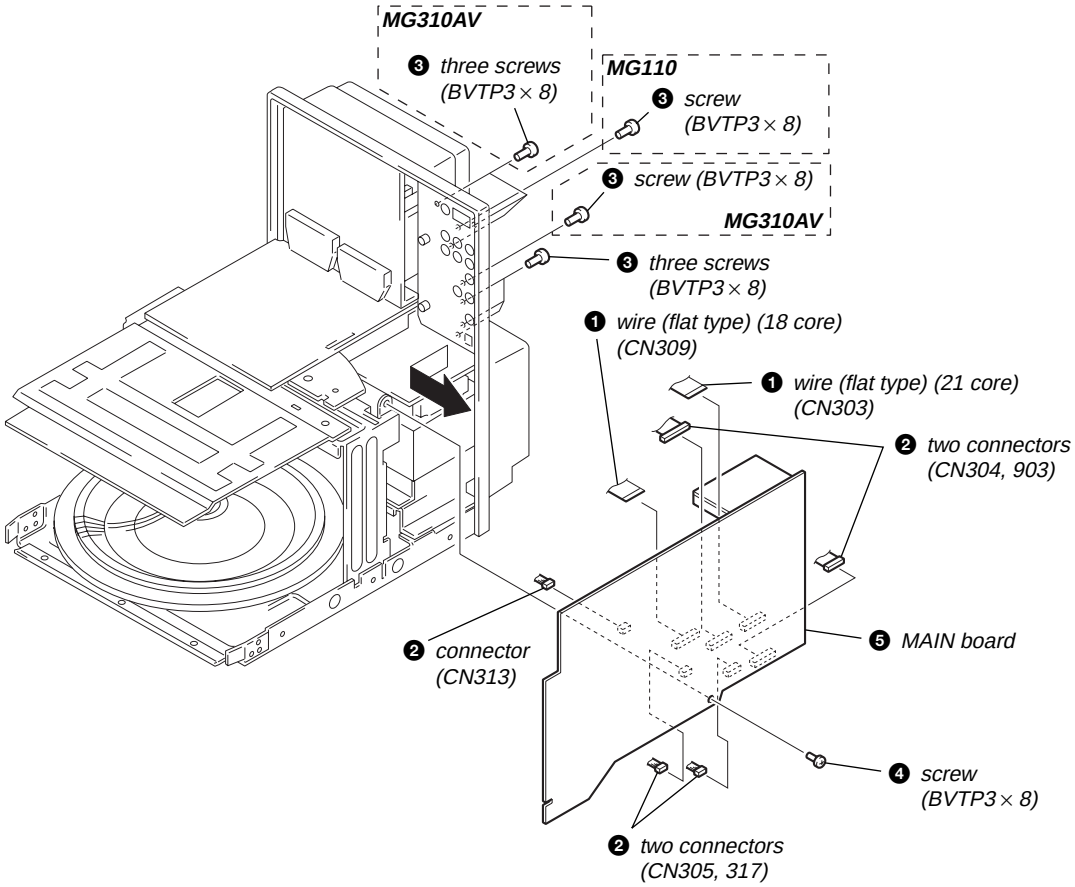
3-2. UPPER COVER



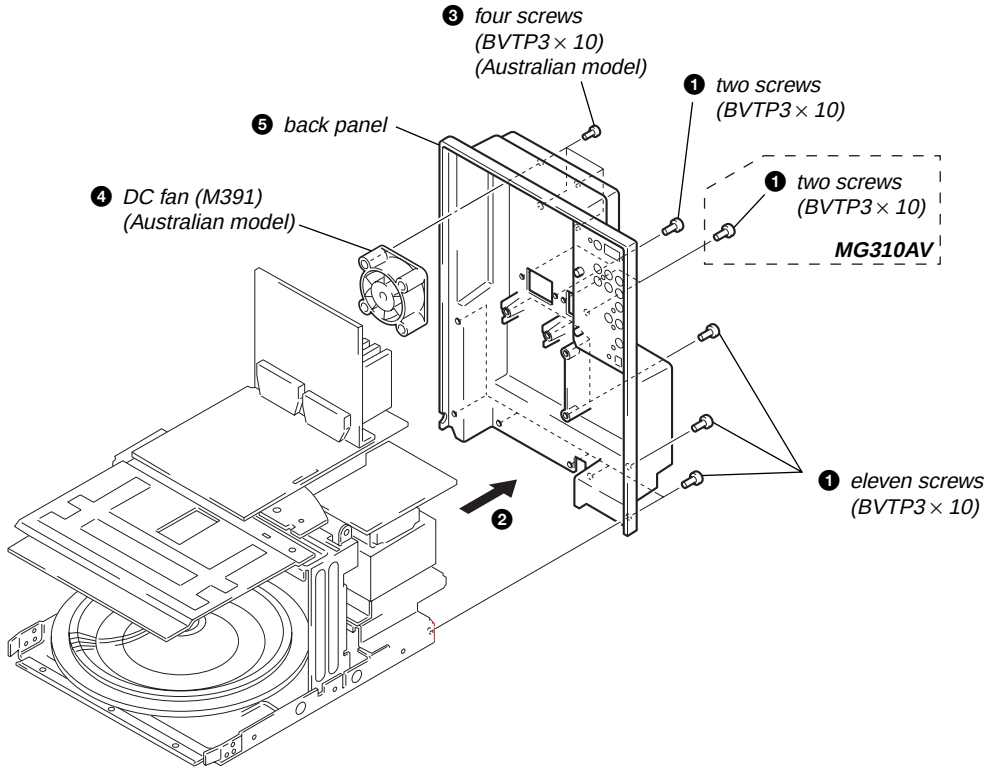
3-3. FRONT BLOCK ASSY


❶ wire (flat type) (10 core) (CN311)
❶ wire (flat type) (11 core) (CN312)
❶ wire (flat type) (17 core) (CN301)
❷ three connectors (CN310, 503, 803)
❻ front block assy
❺ two bosses
❹ screw (KTP3 × 8)
❺ two bosses
❹ screw (KTP3 × 8)
❸ three screws (BVTP3 × 8)

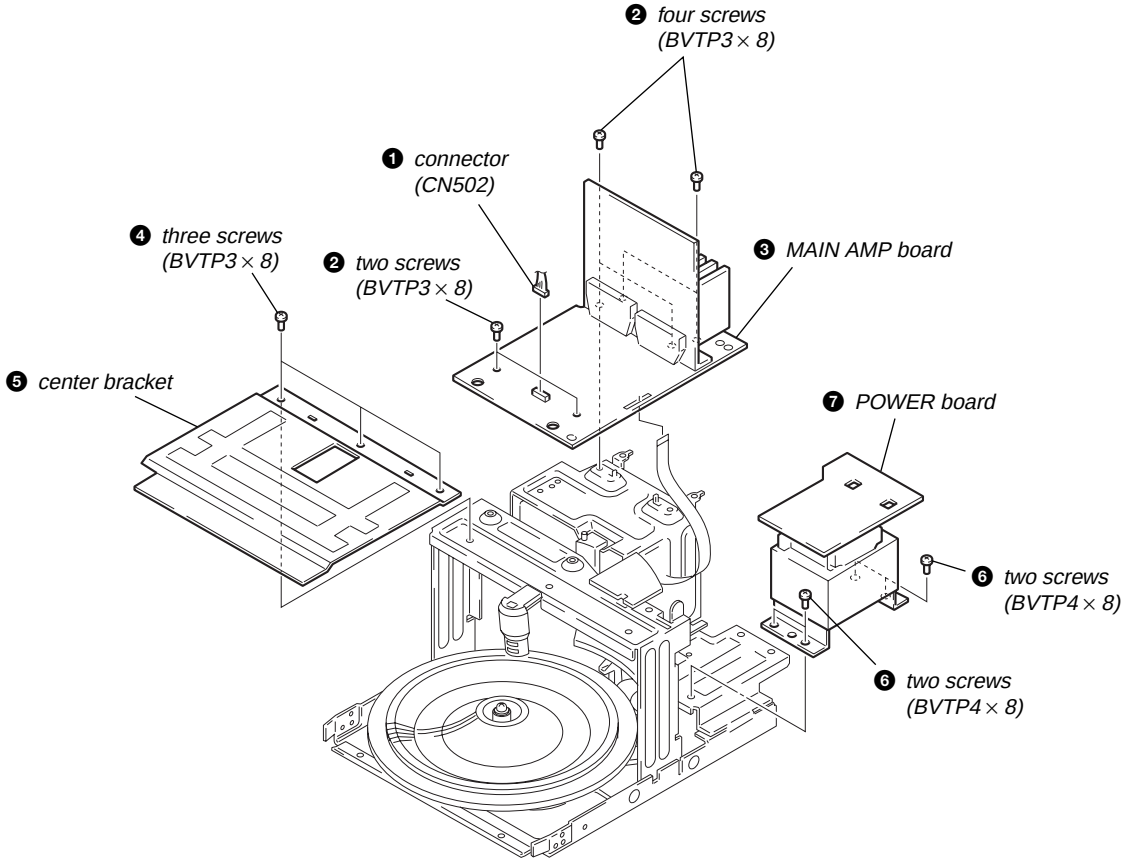
3-4. MAIN BOARD


MG310AV
❸ three screws (BVTP3 × 8)
MG110
❸ screw (BVTP3 × 8)
❸ screw (BVTP3 × 8)
MG310AV
❸ three screws (BVTP3 × 8)
❶ wire (flat type) (18 core) (CN309)
❶ wire (flat type) (21 core) (CN303)
❷ two connectors (CN304, 903)
❷ connector (CN313)
❺ MAIN board
❹ screw (BVTP3 × 8)
❷ two connectors (CN305, 317)

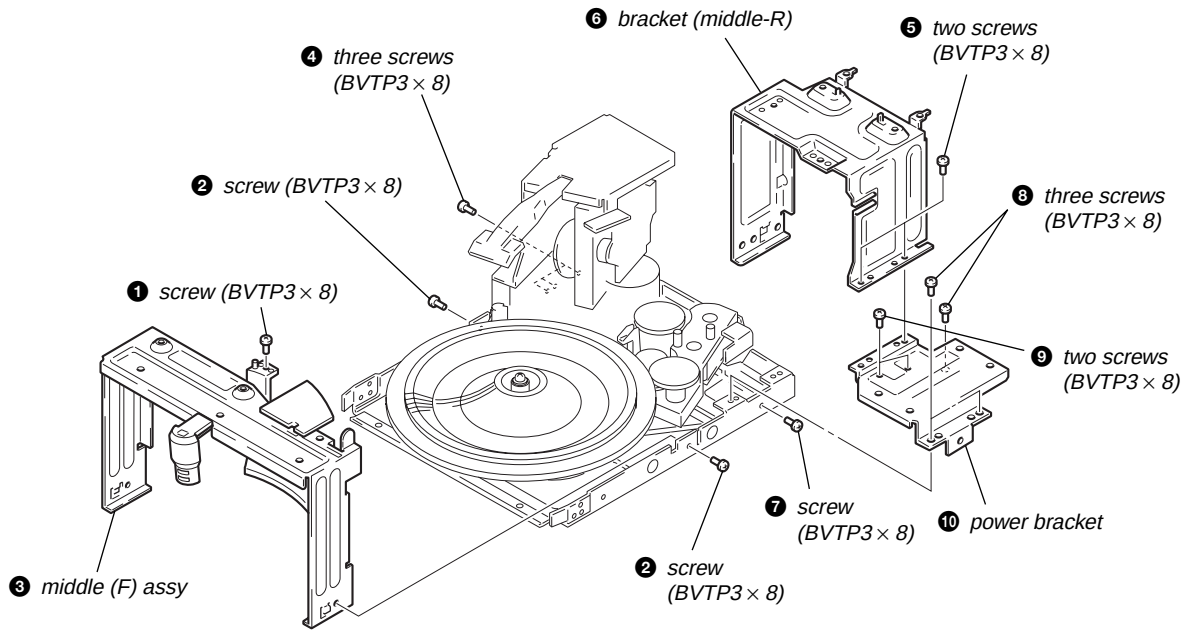
3-5. BACK PANEL, DC FAN (M391) (Australian model)


❸ four screws (BVTP3 × 10) (Australian model)
❶ two screws (BVTP3 × 10)
❺ back panel
❹ DC fan (M391) (Australian model)
❶ two screws (BVTP3 × 10)
MG310AV
❶ eleven screws (BVTP3 × 10)
❷

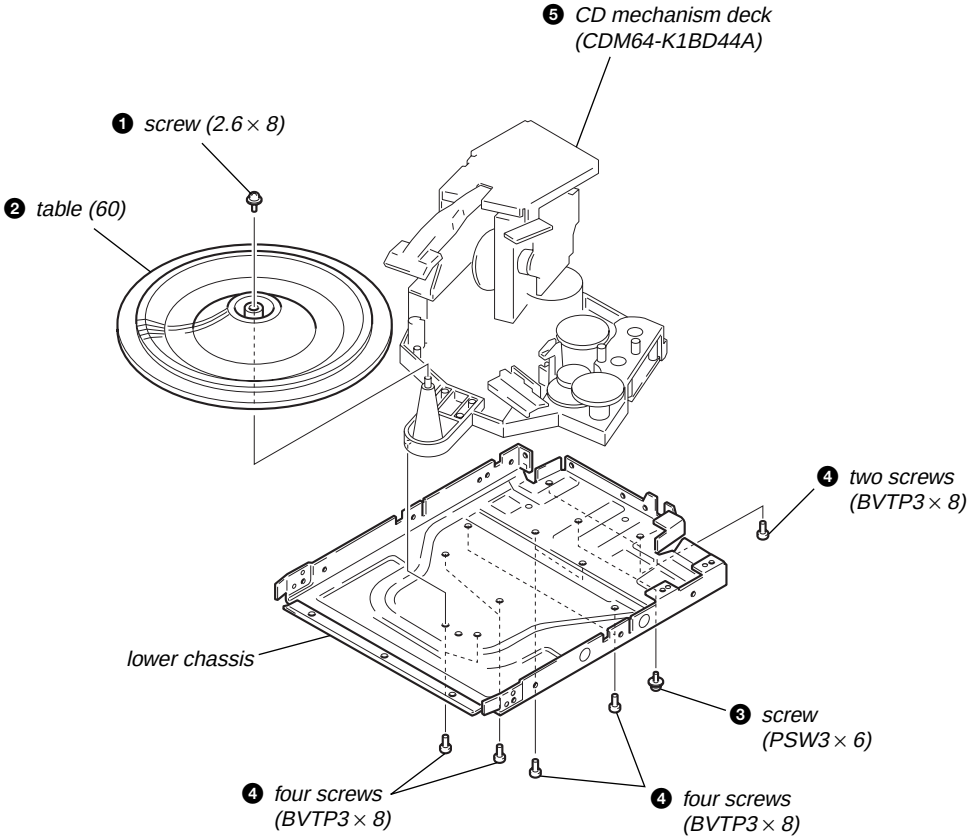
3-6. MAIN AMP BOARD, POWER BOARD


❷ four screws (BVTP3 × 8)
❶ connector (CN502)
❹ three screws (BVTP3 × 8)
❷ two screws (BVTP3 × 8)
❸ MAIN AMP board
❺ center bracket
❼ POWER board
❻ two screws (BVTP4 × 8)
❻ two screws (BVTP4 × 8)

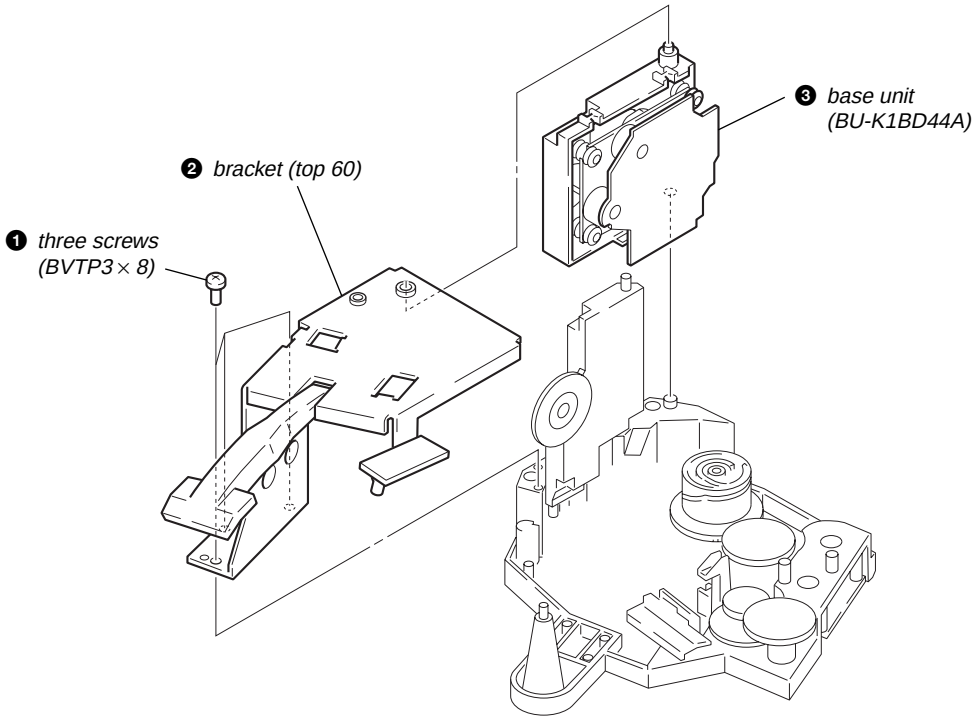
3-7. MIDDLE (F) ASSY, BRACKET (MIDDLE-R), POWER BRACKET


❻ bracket (middle-R)
❺ two screws (BVTP3 × 8)
❹ three screws (BVTP3 × 8)
❷ screw (BVTP3 × 8)
❽ three screws (BVTP3 × 8)
❶ screw (BVTP3 × 8)
❾ two screws (BVTP3 × 8)
❼ screw (BVTP3 × 8)
❿ power bracket
❸ middle (F) assy
❷ screw (BVTP3 × 8)

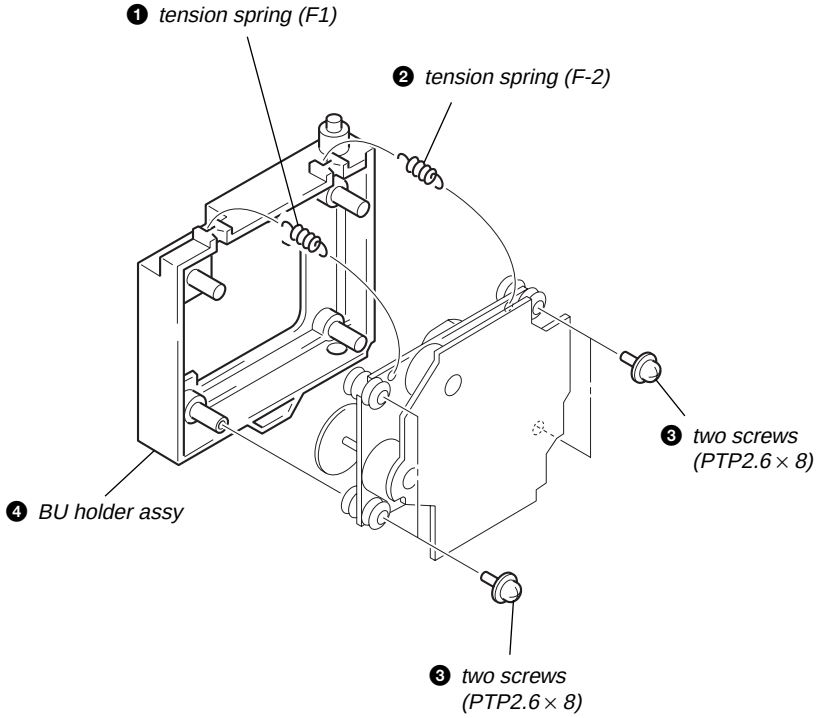
3-8. CD MECHANISM DECK (CDM64-K1BD44A)


❺ CD mechanism deck (CDM64-K1BD44A)
❶ screw (2.6 × 8)
❷ table (60)
❹ two screws (BVTP3 × 8)
lower chassis
❸ screw (PSW3 × 6)
❹ four screws (BVTP3 × 8)
❹ four screws (BVTP3 × 8)

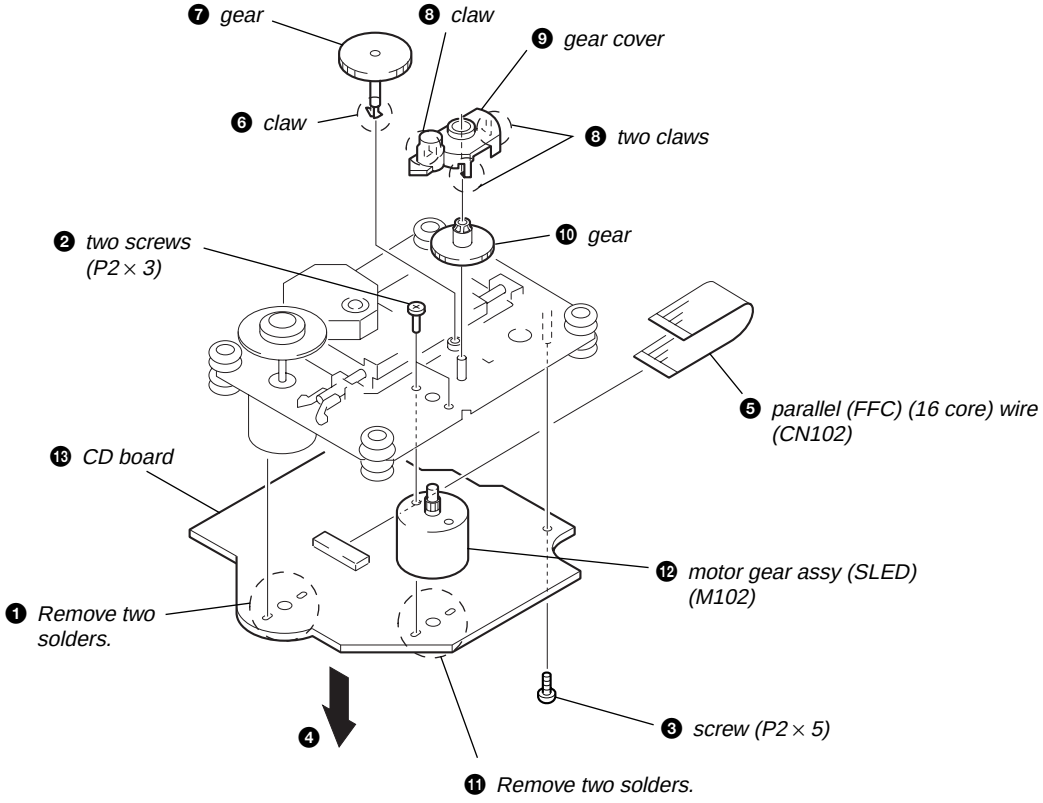
3-9. BASE UNIT (BU-K1BD44A)



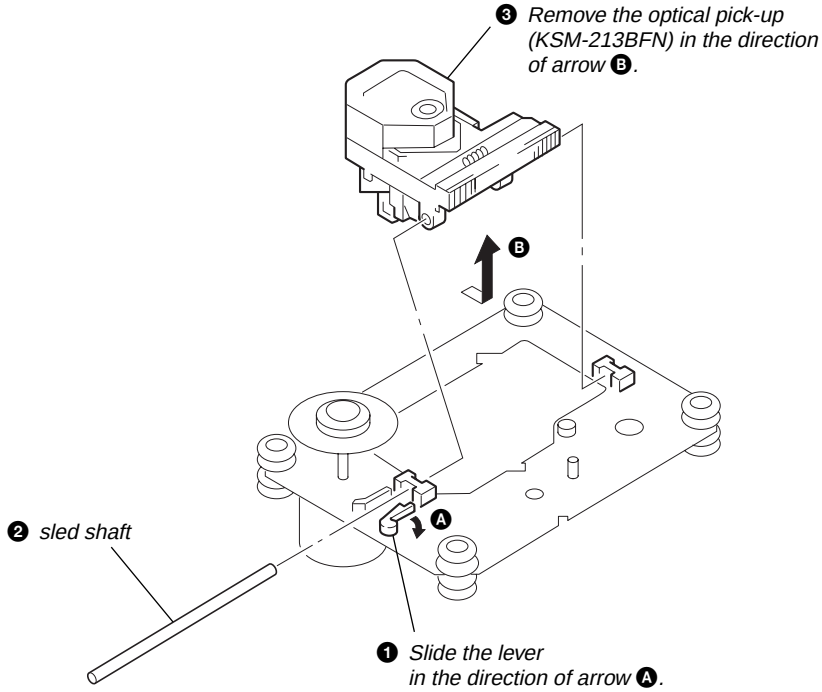
3-10. BU HOLDER ASSY



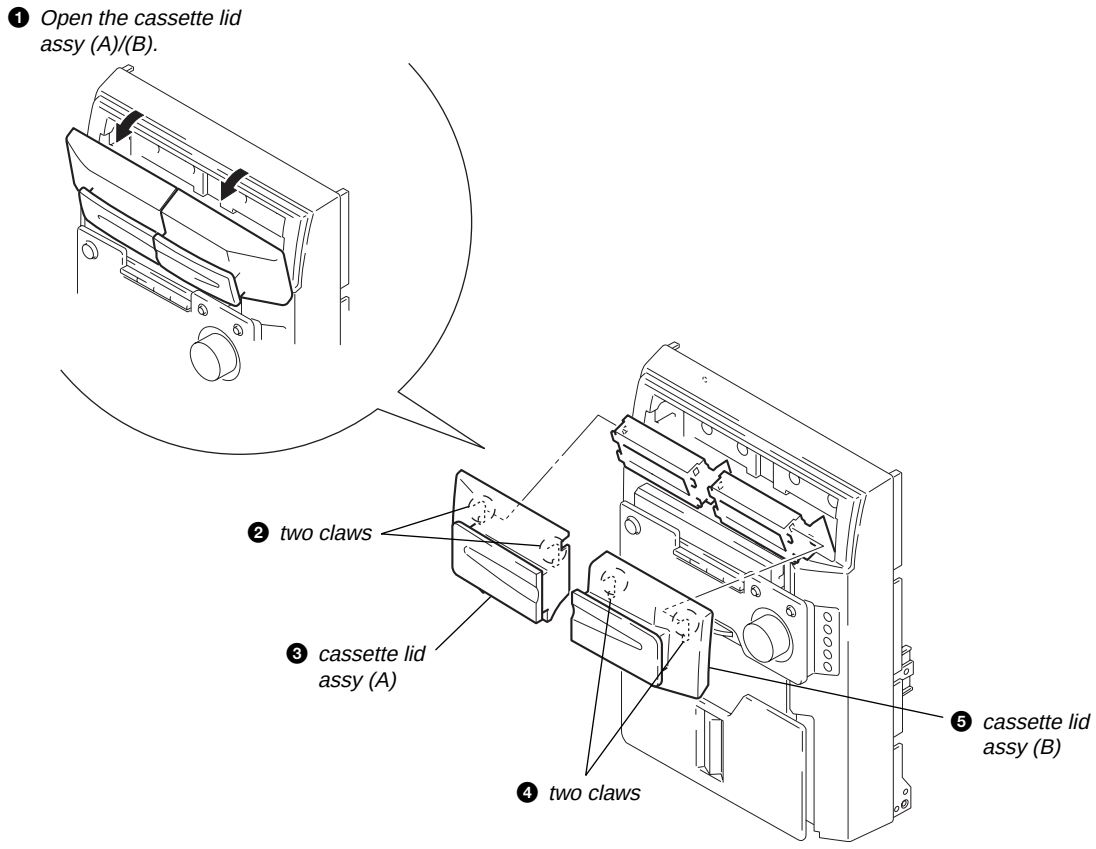
3-11. MOTOR GEAR ASSY (SLED) (M102), CD BOARD



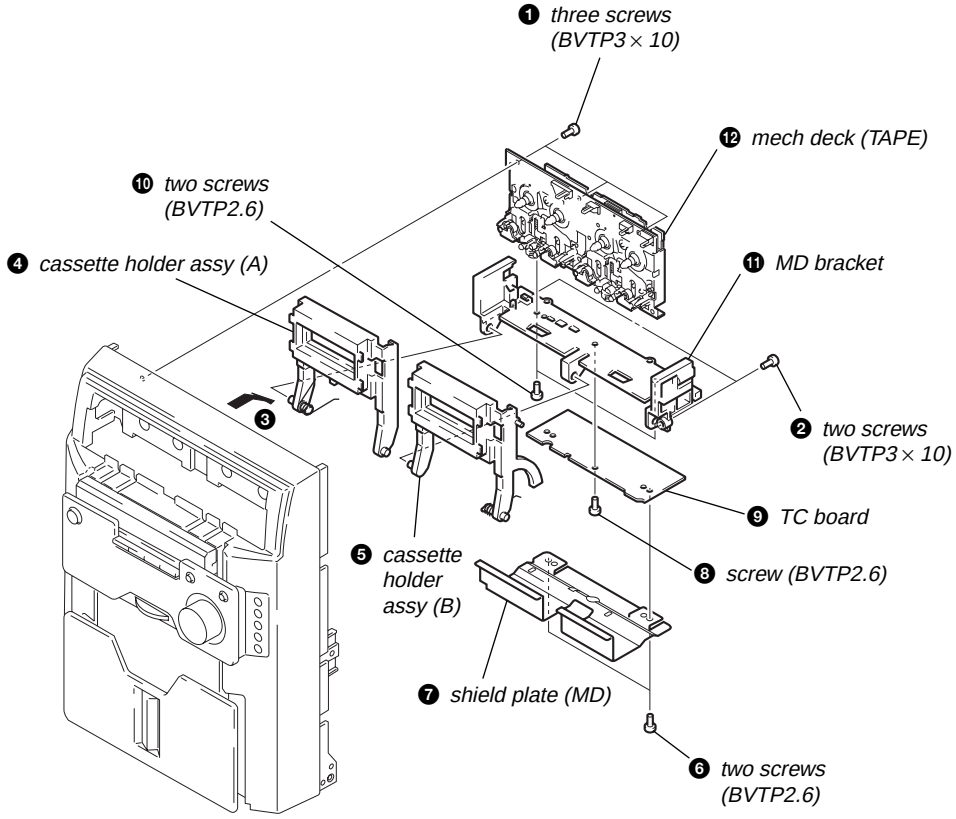
3-12. OP BASE ASSY (KSM-213BFN)



3-13. CASSETTE LID ASSY (A) / (B)



3-14. MECH DECK (TAPE)


❶ three screws (BVTP3 × 10)
⓬ mech deck (TAPE)
❿ two screws (BVTP2.6)
❹ cassette holder assy (A)
⓫ MD bracket
❸
❷ two screws (BVTP3 × 10)
❾ TC board
❺ cassette holder assy (B)
❽ screw (BVTP2.6)
❼ shield plate (MD)
❻ two screws (BVTP2.6)

SECTION 4
TEST MODE

[MC Cold Reset]

• The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Turn the power ON or set to the DEMO mode.
2. Press three buttons of [■], [CLEAR], and [DISPLAY] simultaneously.
3. The set is reset, and becomes DEMO mode.

[Change-over the AM Tuning Interval] (EXCEPT AEP, UK, and Saudi Arabia models)

• The AM tuning interval can be changed over 9 kHz or 10 kHz.

Procedure:

1. Press the [I/⏻] button to turn the power ON.
2. Select the function “TUNER”, and press the [TUNER/BAND] button to select the BAND “AM”.
3. Press the [I/⏻] button to turn the power OFF.
4. Press the [ENTER] and [I/⏻] buttons simultaneously to the tuning interval is changed over.

[CD Delivery Mode and RAM Initialize]

• This mode moves the optical pick-up to the position durable to vibration, and initializes the RAM. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the [I/⏻] button to turn the power ON.
2. Press three buttons of [ENTER], [▶▶] , and [CLEAR] simultaneously.
3. The set is turn the power off and initializes the RAM automatically. A message “LOCK” is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons of [■], [MENU], and [DISPLAY] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
3. Press the [MENU] button and go to the version display mode. Press the [◀◀] button and go to the key and jog test mode.
4. To release from these mode, press three buttons in the same manner as step 1, or disconnect the power cord.

– Version display mode –

Press the [– I◀◀] button to display the version .

– Key and jog test mode –

In the key check mode, the fluorescent indicator tube displays “K 0 J0 V0”. Each time a button is pressed, “K” value increases. However, once a button is pressed, it is no longer taken into account.

“J” value increases like 1, 2, 3 ... if turn the [DISC ACCESS] dial clockwise, or it decreases like 0, 9, 8 ... if turn the [DISC ACCESS] dial counterclockwise.

“V” value increases like 1, 2, 3 ... if turn the [VOLUME] knob clockwise, or it decreases like 0, 9, 8 ... if turn the [VOLUME] knob counterclockwise.

[CD Service Mode]

• This mode can run the CD sled motor optionally. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press the [I/⏻] button to turn the power ON.
2. Select the function “CD”.
3. Press three buttons of [ENTER], [▶▶] , and [REPEAT] simultaneously.
4. Set to the Sled Servo mode.
5. With the CD in stop status, press the [▶▶] button to move the optical pick-up to outside track and display “SLED OUT”, or press the [◀◀] button to move the optical pick-up to inside track and display “SLED IN”.
6. To exit from this mode, perform as follows.
   1) Move the optical pick-up to the most inside track.
   2) Press three buttons of [■], [CLEAR], and [DISPLAY] simultaneously. (cold reset)

Notes:
- Always move the optical pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

SECTION 5
MECHANICAL ADJUSTMENTS

• TAPE MECHANISM DECK SECTION

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads — pinch rollers
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	2.94 mN • m to 7.84 mN • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.14 mN • m to 0.59 mN • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	2.94 mN • m to 7.84 mN • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.14 mN • m to 0.59 mN • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.86 mN • m to 17.64 mN • m 71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	more than 0.98 N • m 100 g or more (3.53 oz or more)
REV tension	CQ-403R	more than 0.98 N • m 100 g or more (3.53 oz or more)

SECTION 6
ELECTRICAL ADJUSTMENTS

DECK SECTION | 0 dB = 0.775 V

Precaution

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.
8. Set to the DOLBY NR OFF.

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, – 10 dB	Azimuth Adjustment
WS-48A	3 kHz, 0 dB	Tape Speed Check

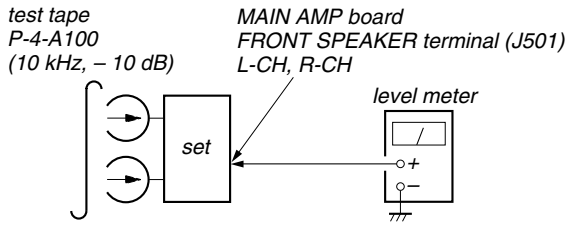
Record/Playback Head Azimuth Adjustment

DECK A DECK B

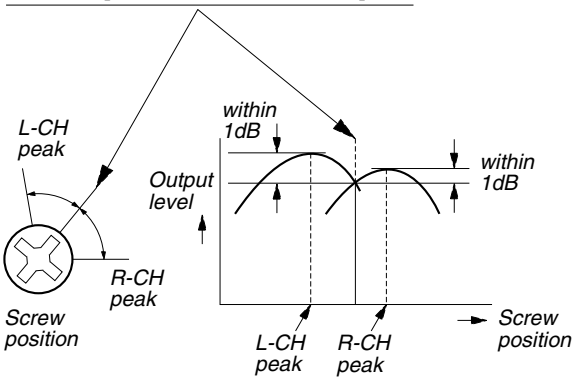
Note: Perform this adjustments for both decks

Procedure:

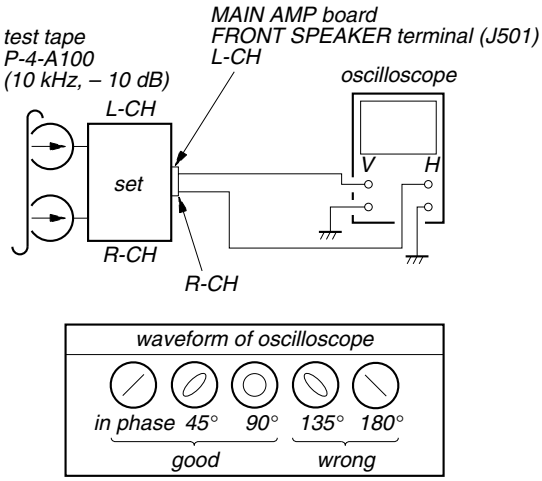
1. Mode: Playback (FWD)



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.

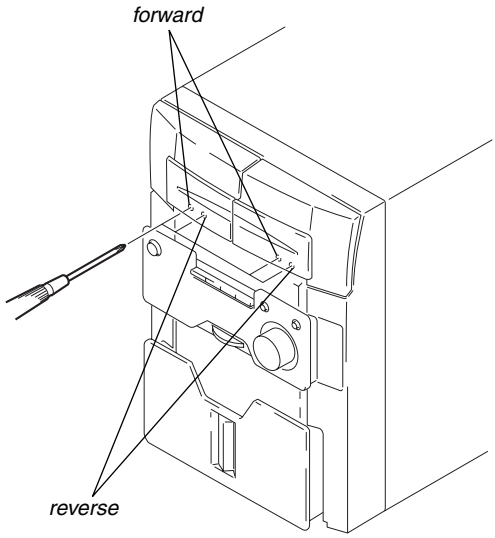


3. Mode: Playback



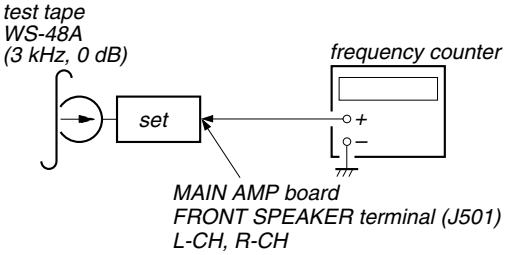
4. Repeat step 1 to 3 in playback (REV) mode.
5. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).



Tape Speed Check DECK B

Mode: Playback



1. Insert the WS-48A into the deck B.
2. Press the ◄► button on the deck B.
3. Confirm that the frequency counter reads 3,000 ± 60 Hz.

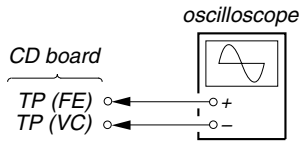
Sample value of Wow and Flutter: 0.3% or less W.RMS (JIS)
(WS-48A)

CD SECTION

Note:
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use PATD-012 disc (4-225-203-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MW impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

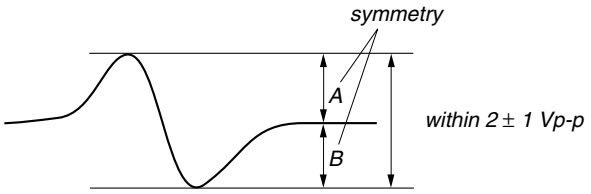
S Curve Check

Connection:



Procedure:
1. Connect an oscilloscope to test point TP (FEI) and TP (VC) on the CD board.
2. Turn the power on.
3. Put the disc (PATD-012) in and turned power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out)
4. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2 ± 1 Vp-p.

S-curve waveform

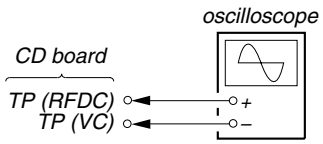


Note: • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

Checking Location: CD board

RFDC Level Check

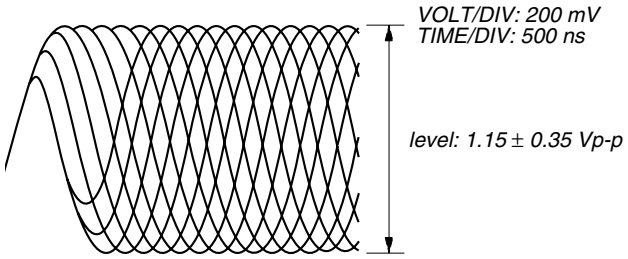
Connection:



Procedure:
1. Connect an oscilloscope to test point TP (RFDC) and TP (VC) on the CD board.
2. Turn the power on.
3. Put the disc (PATD-012) in to playback the number two track.
4. Confirm that oscilloscope waveform is clear and check RFDC signal level is correct or not.

Note: A clear RFDC signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

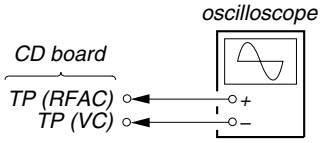
RFDC signal waveform



Checking Location: CD board

RFAC Level Check

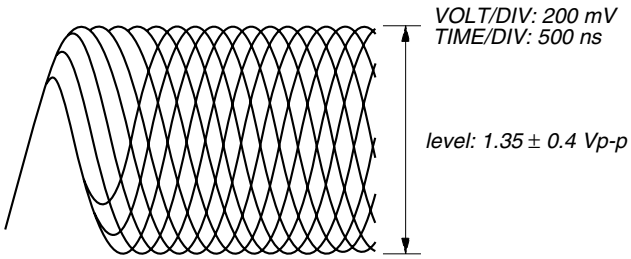
Connection:



Procedure:
1. Connect an oscilloscope to test point TP (RFAC) and TP (VC) on the CD board.
2. Turn the power on.
3. Put the disc (PATD-012) in to playback the number two track.
4. Confirm that oscilloscope waveform is clear and check RFAC signal level is correct or not.

Note: A clear RFAC signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

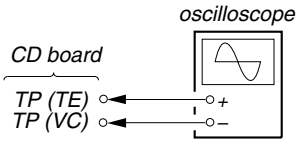
RFAC signal waveform



Checking Location: CD board

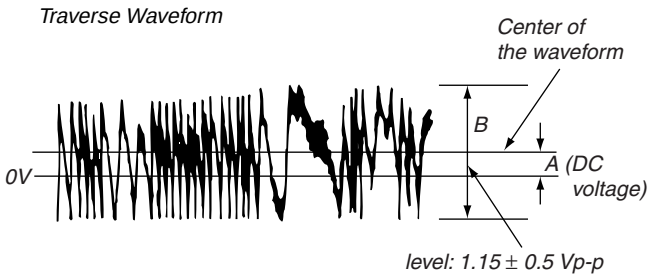
E-F Balance Check

Connection:

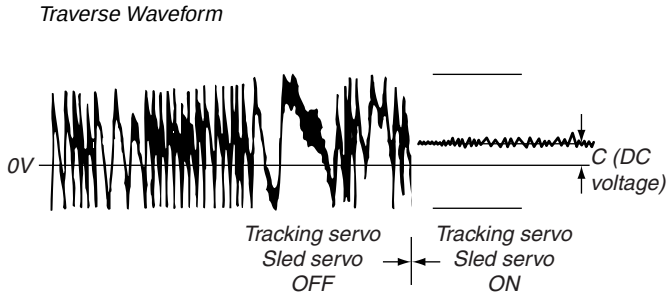


Procedure:

1. Connect an oscilloscpe to test point TP (TE) and TP (VC) on the CD board.
2. Turn the power on.
3. Put the disc (PATD-012) in to playback the number two track.
4. Press the REPEAT button. (The tracking servo and the sledding servo are turned OFF)
5. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ± 22%



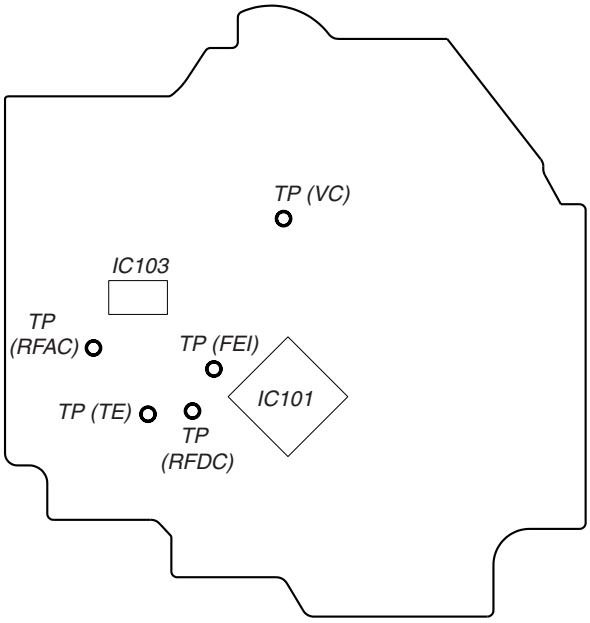
6. Press the REPEAT button. (The tracking servo and sledding servo are turned ON)
   Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 5.



Checking Location: CD board

Checking Location:

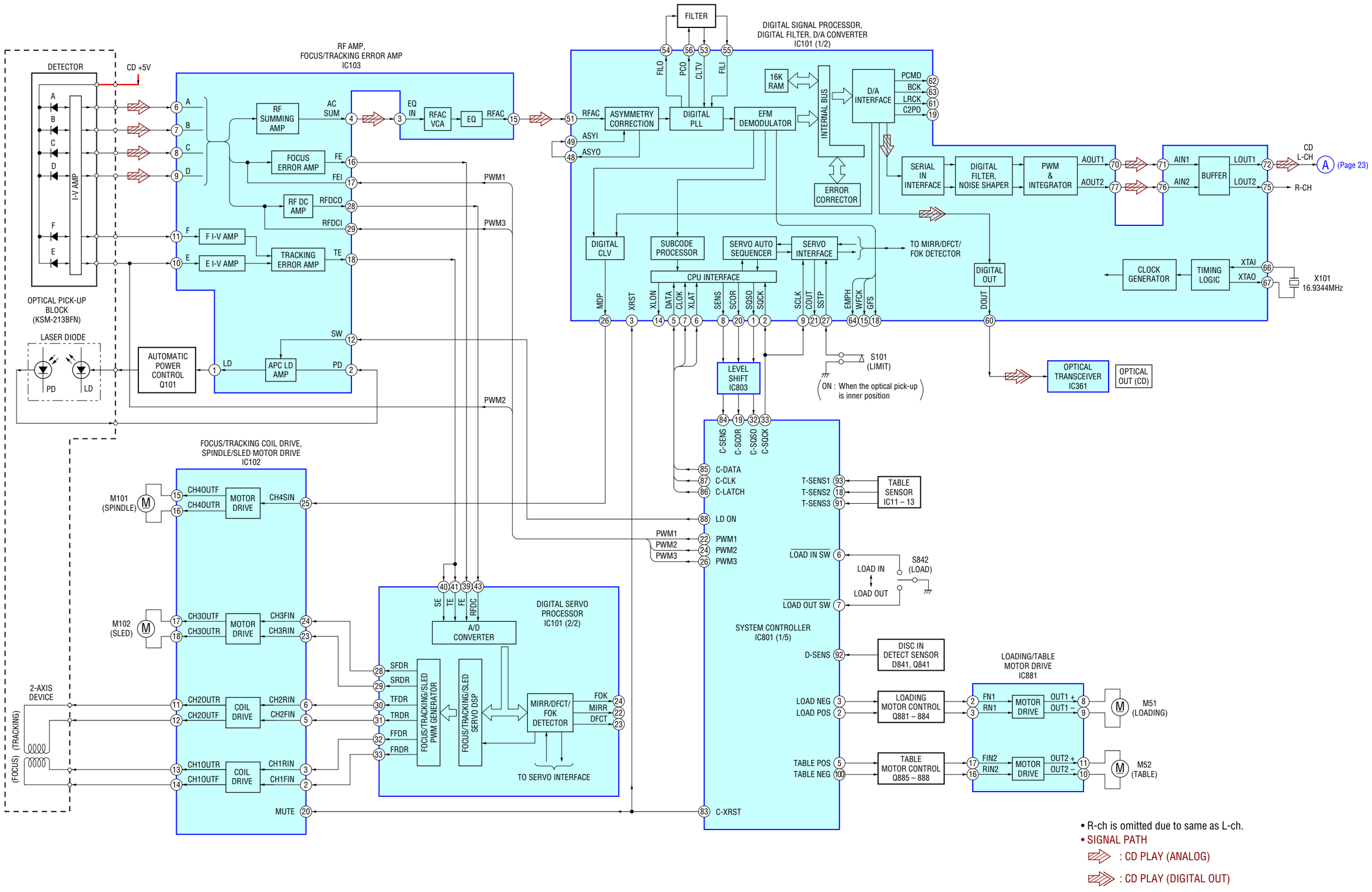
– CD BOARD (Conductor Side) –



MEMO

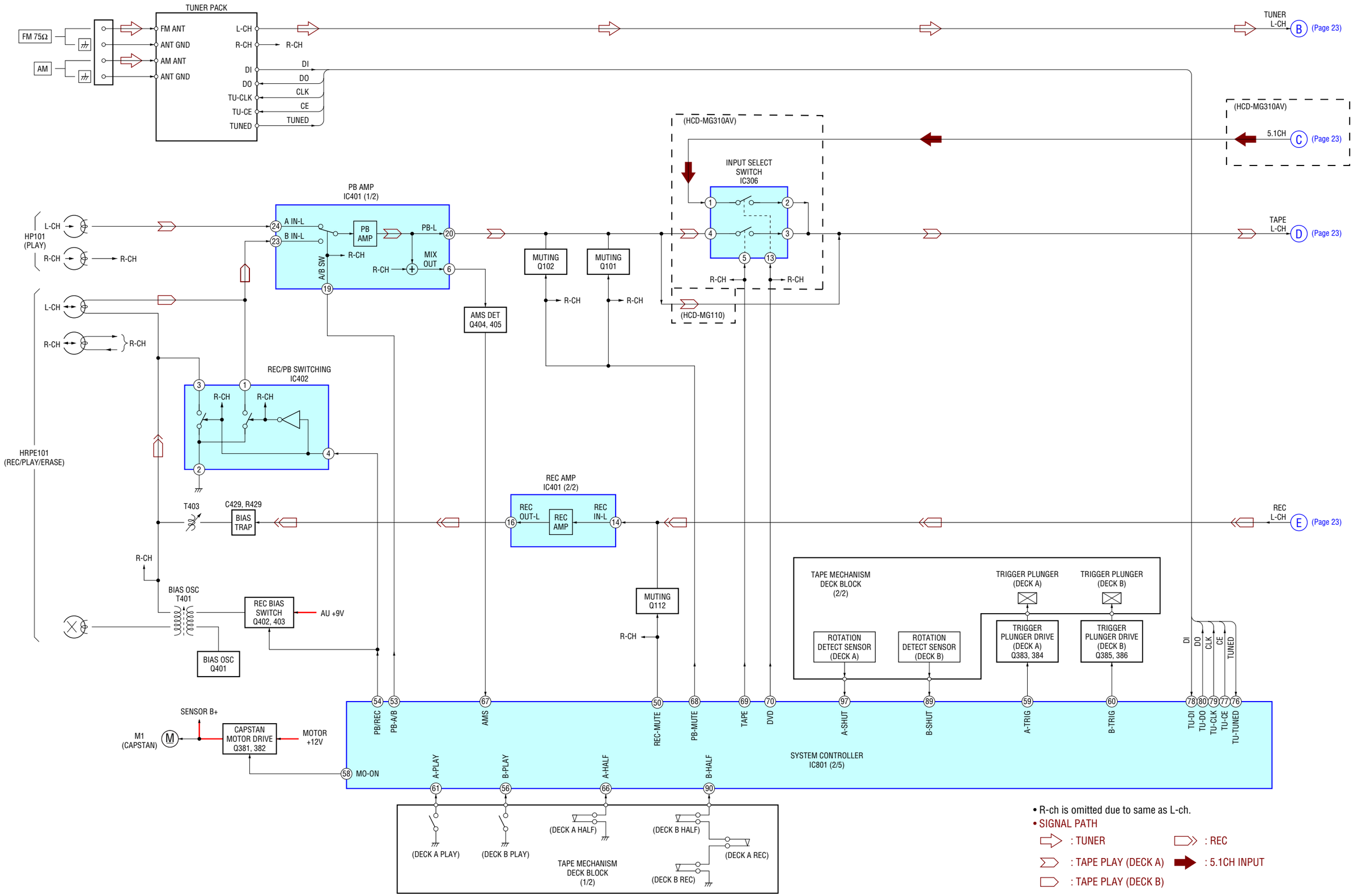
SECTION 7
DIAGRAMS

7-1. BLOCK DIAGRAM – CD SERVO Section –



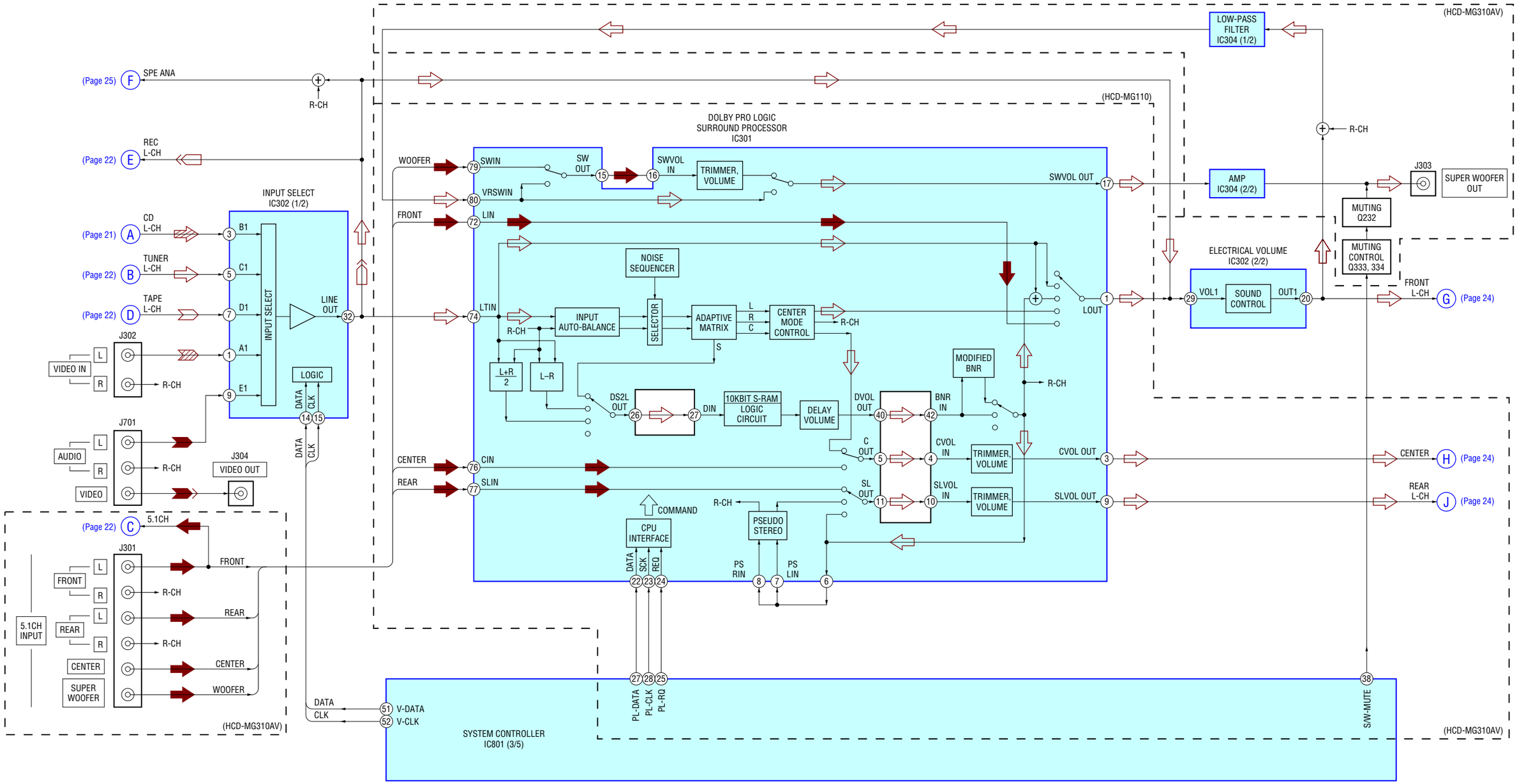
- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  : CD PLAY (ANALOG)
  : CD PLAY (DIGITAL OUT)

7-2. BLOCK DIAGRAM – TUNER/TAPE DECK Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : TUNER
  - : REC
  - : TAPE PLAY (DECK A)
  - : 5.1CH INPUT
  - : TAPE PLAY (DECK B)

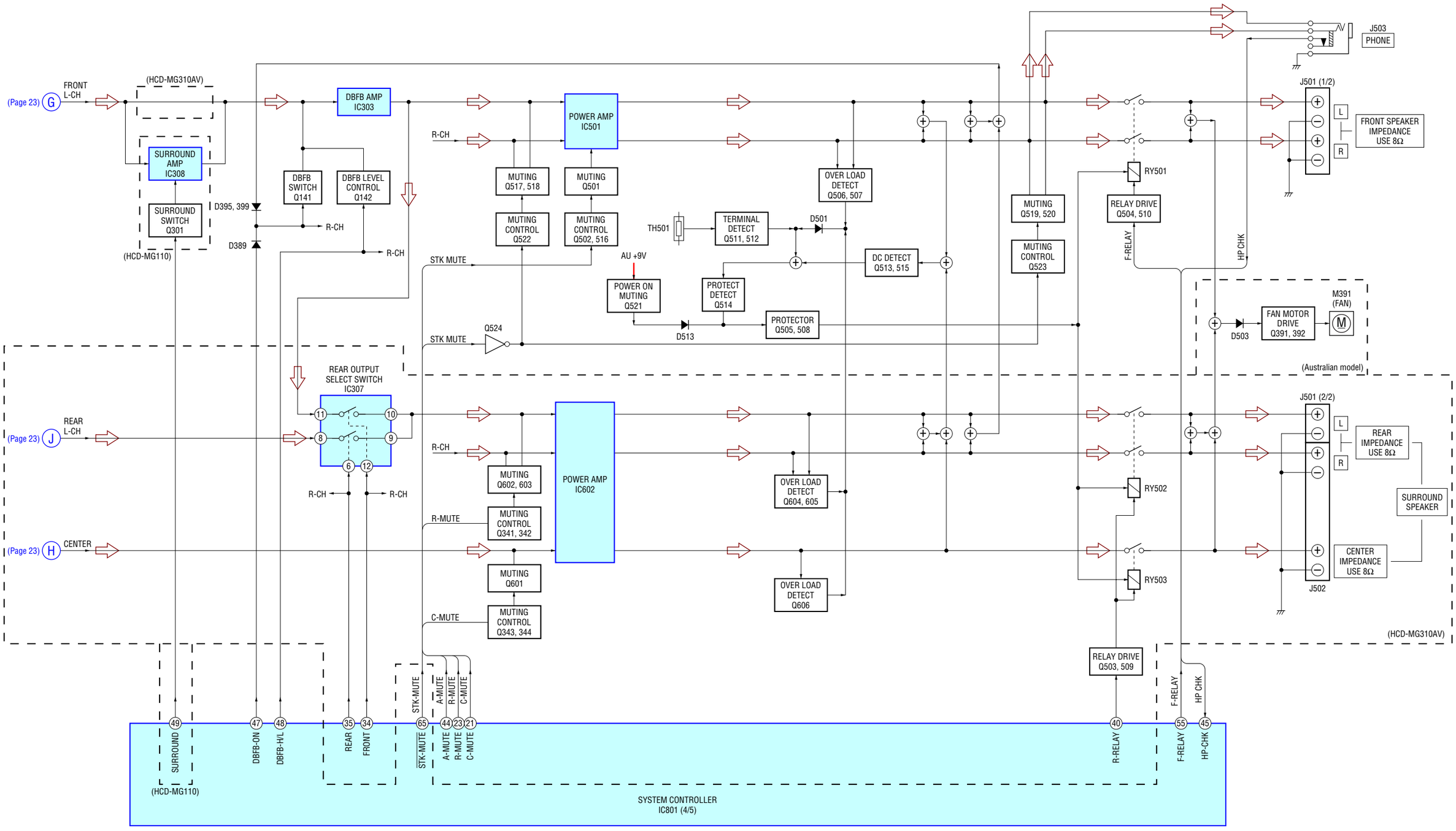
7-3. BLOCK DIAGRAM – SURROUND Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH

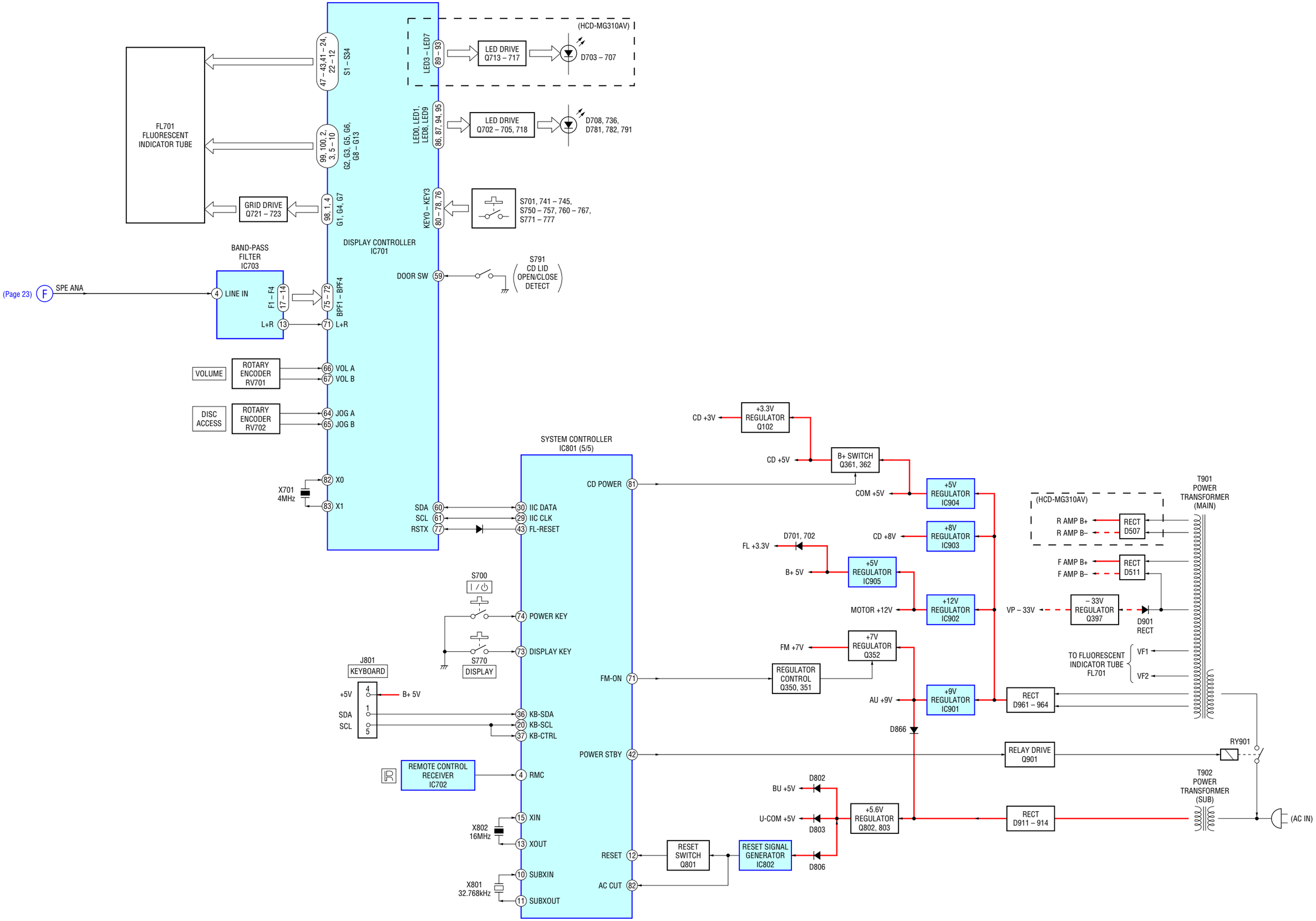
: TUNER
: CD PLAY
: TAPE PLAY
: REC
: VIDEO IN (AUDIO)
: GAME IN (AUDIO)
: GAME IN (VIDEO)
: 5.1CH INPUT

7-4. BLOCK DIAGRAM – AMP Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  ⇨ : TUNER

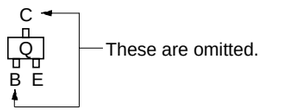
7-5. BLOCK DIAGRAM – DISPLAY/POWER SUPPLY Section –

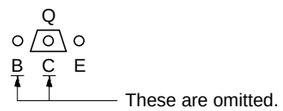


7-6. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS (In addition to this, the necessary note is printed in each block)

Note on Printed Wiring Boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ⊡← : indicates side identified with part number.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.
- Indication of transistor.





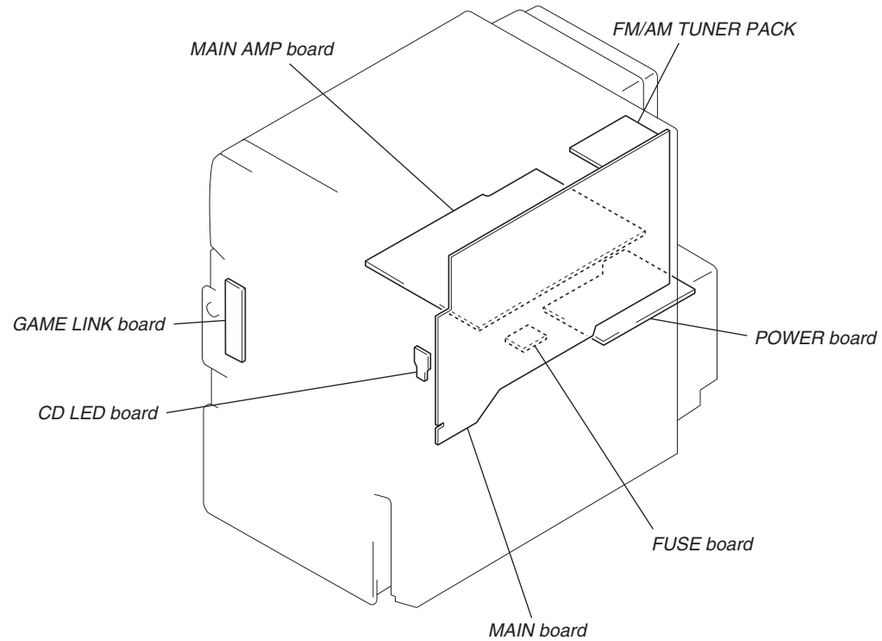
Note on Schematic Diagram:

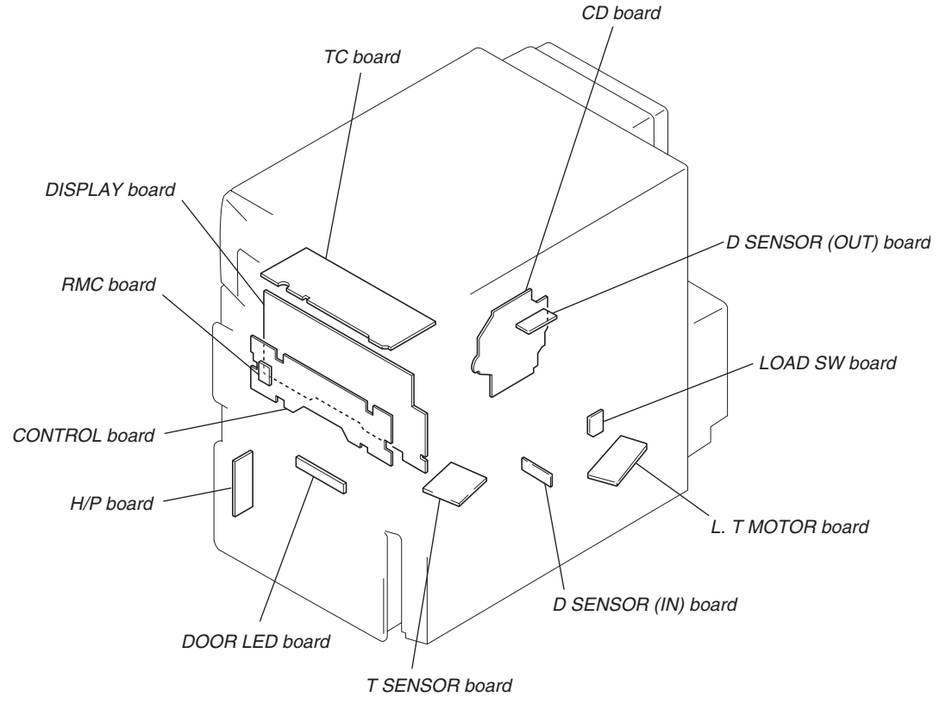
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹/₄ W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- : B– Line.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : TUNER
  - : CD PLAY (ANALOG)
  - : CD PLAY (DIGITAL OUT)
  - : TAPE PLAY (DECK A)
  - : TAPE PLAY (DECK B)
  - : REC
  - : VIDEO IN (AUDIO)
  - : GAME IN (AUDIO)
  - : GAME IN (VIDEO)
  - : 5.1CH INPUT
- Abbreviation
  - AUS : Australian model
  - CND : Canadian model

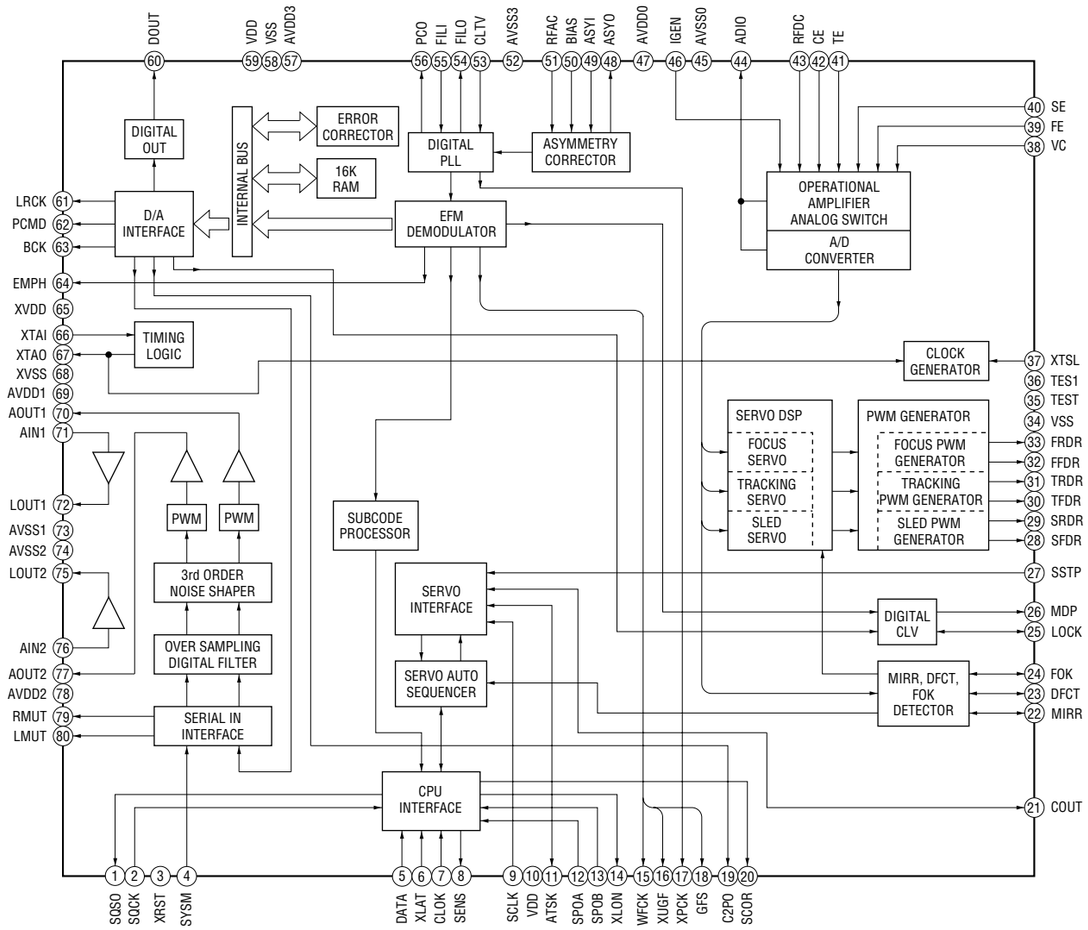
- **Circuit Boards Location**



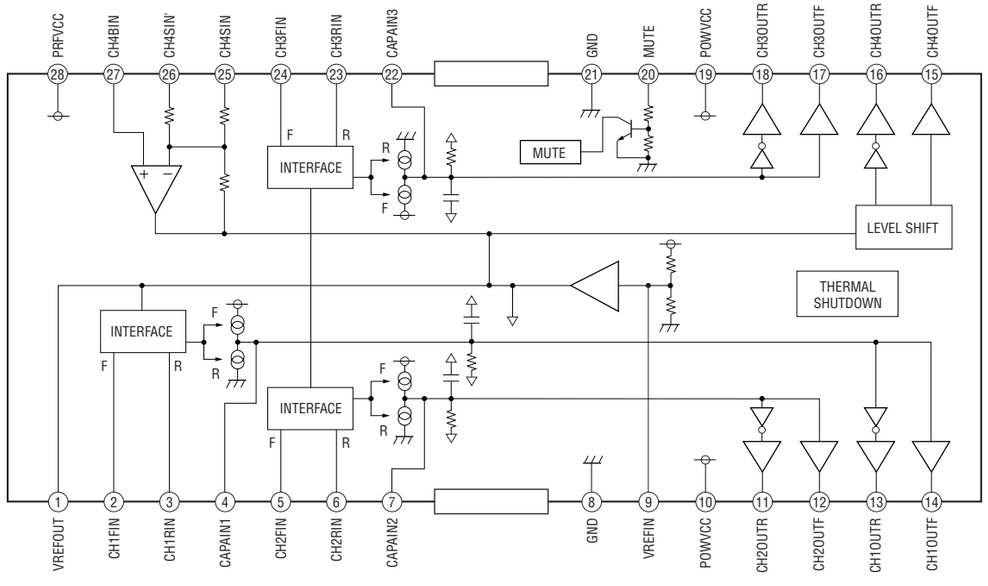


• **IC Block Diagrams**
– CD Board –

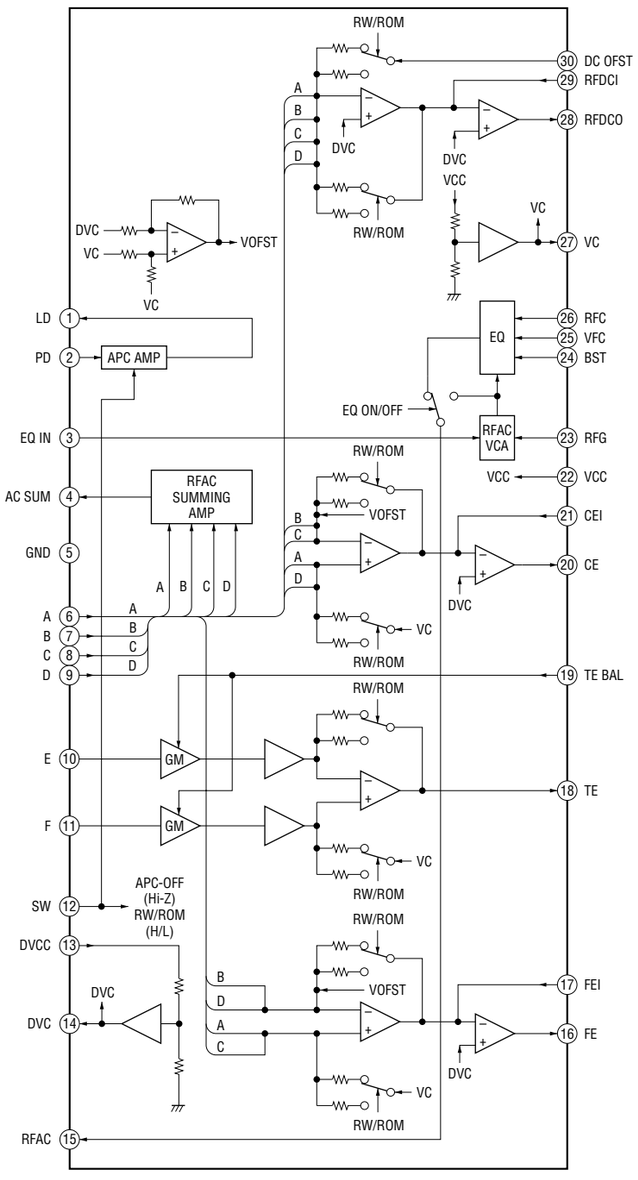
IC101 CXD3017Q



IC102 BA5974FP-E2

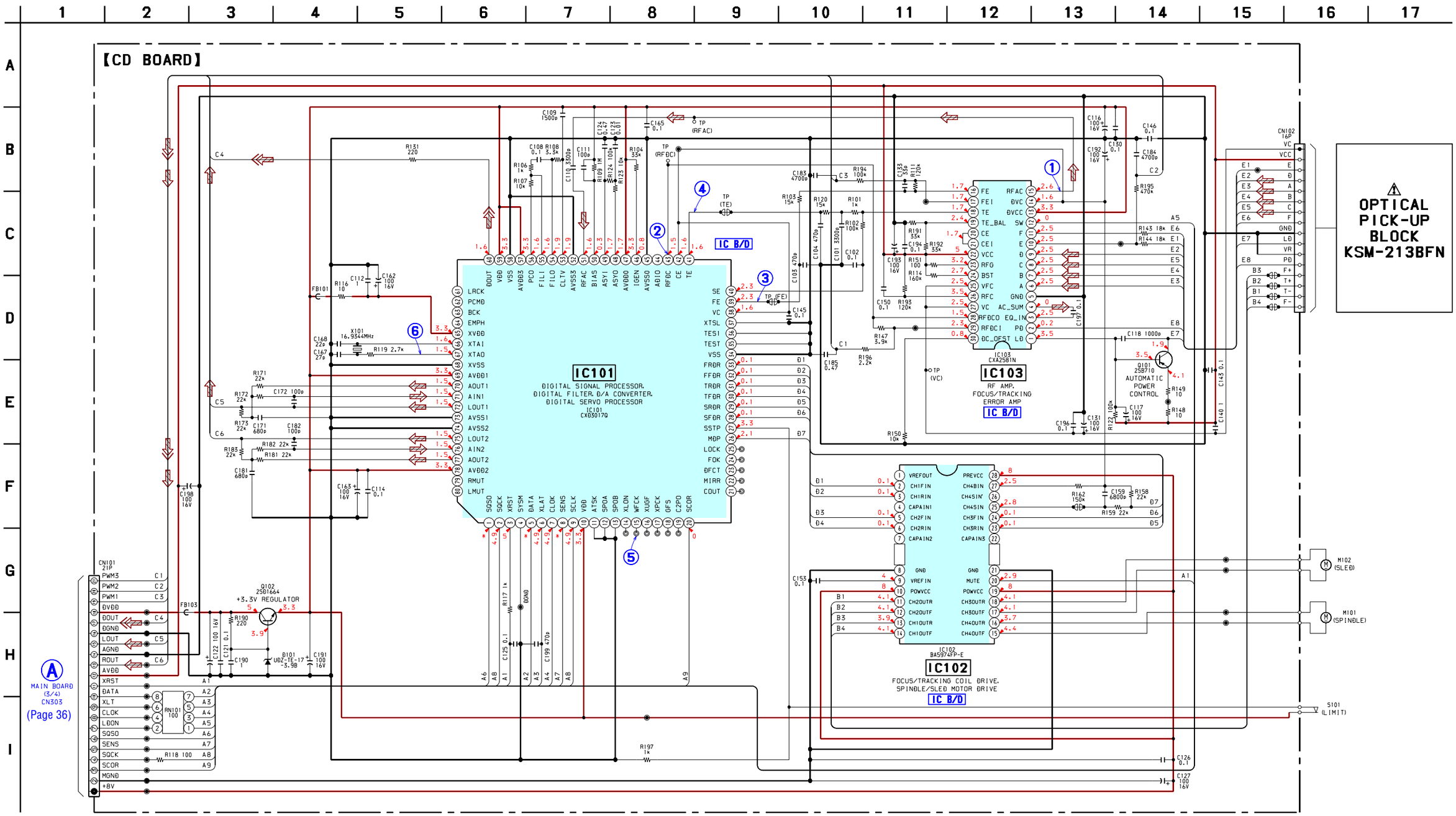


IC103 CXA2581N-T4



7-7. SCHEMATIC DIAGRAM – CD Section –

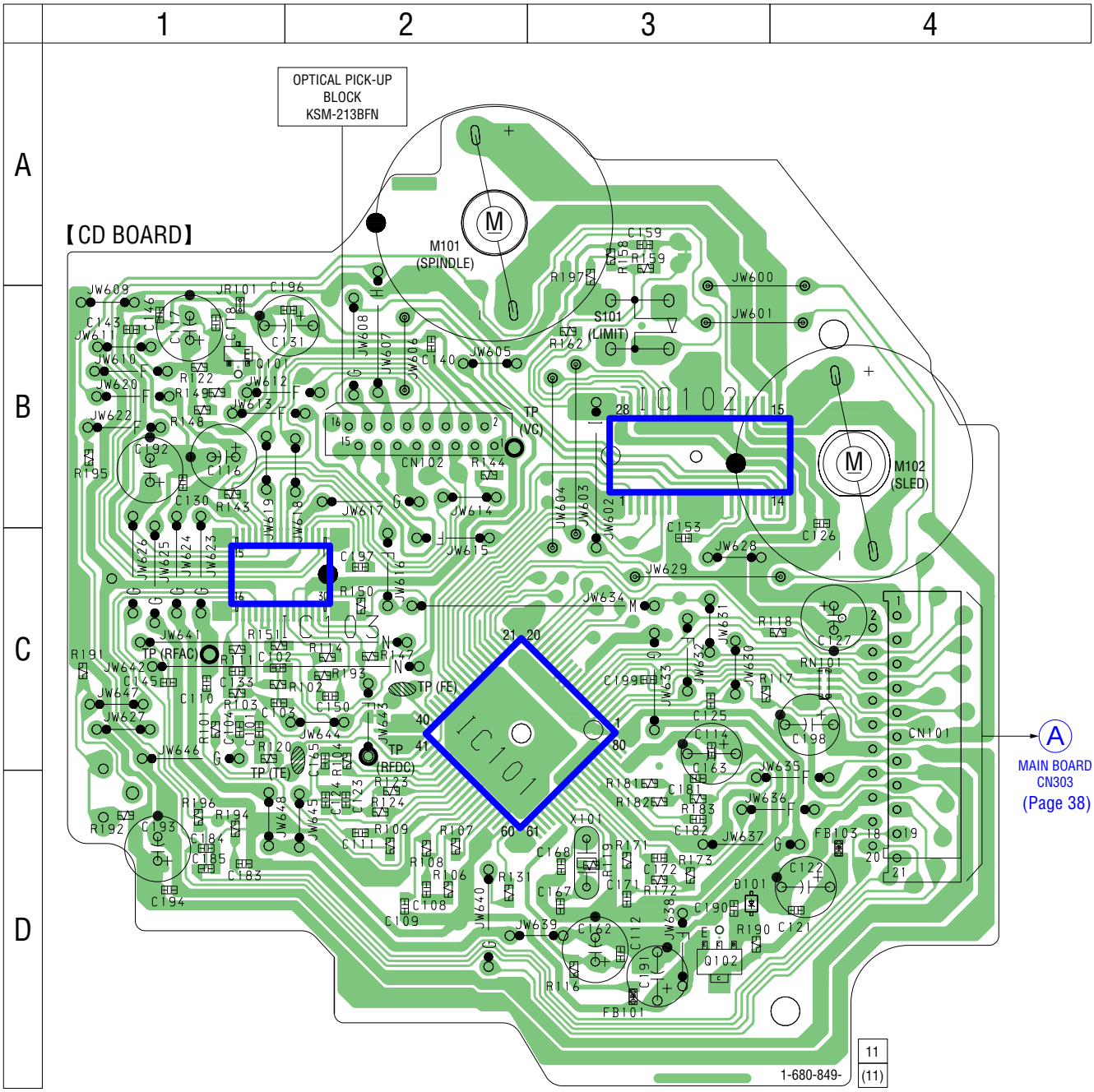
• See page 39 for Waveforms. • See page 27 for IC Block Diagrams.



- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  ＊ : Impossible to measure

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-8. PRINTED WIRING BOARD – CD Section – • See page 26 for Circuit Boards Location.

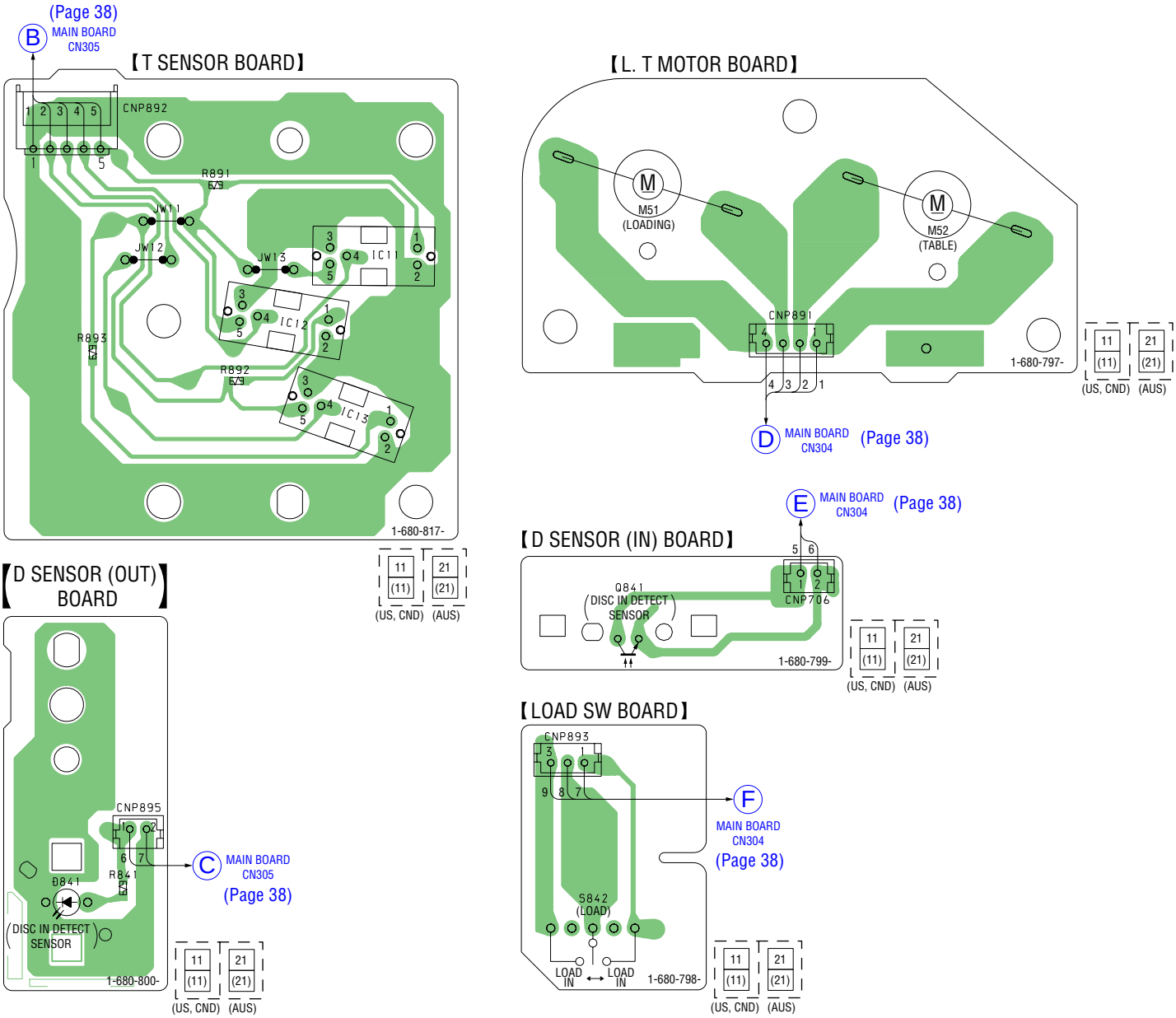


- **Semiconductor Location**

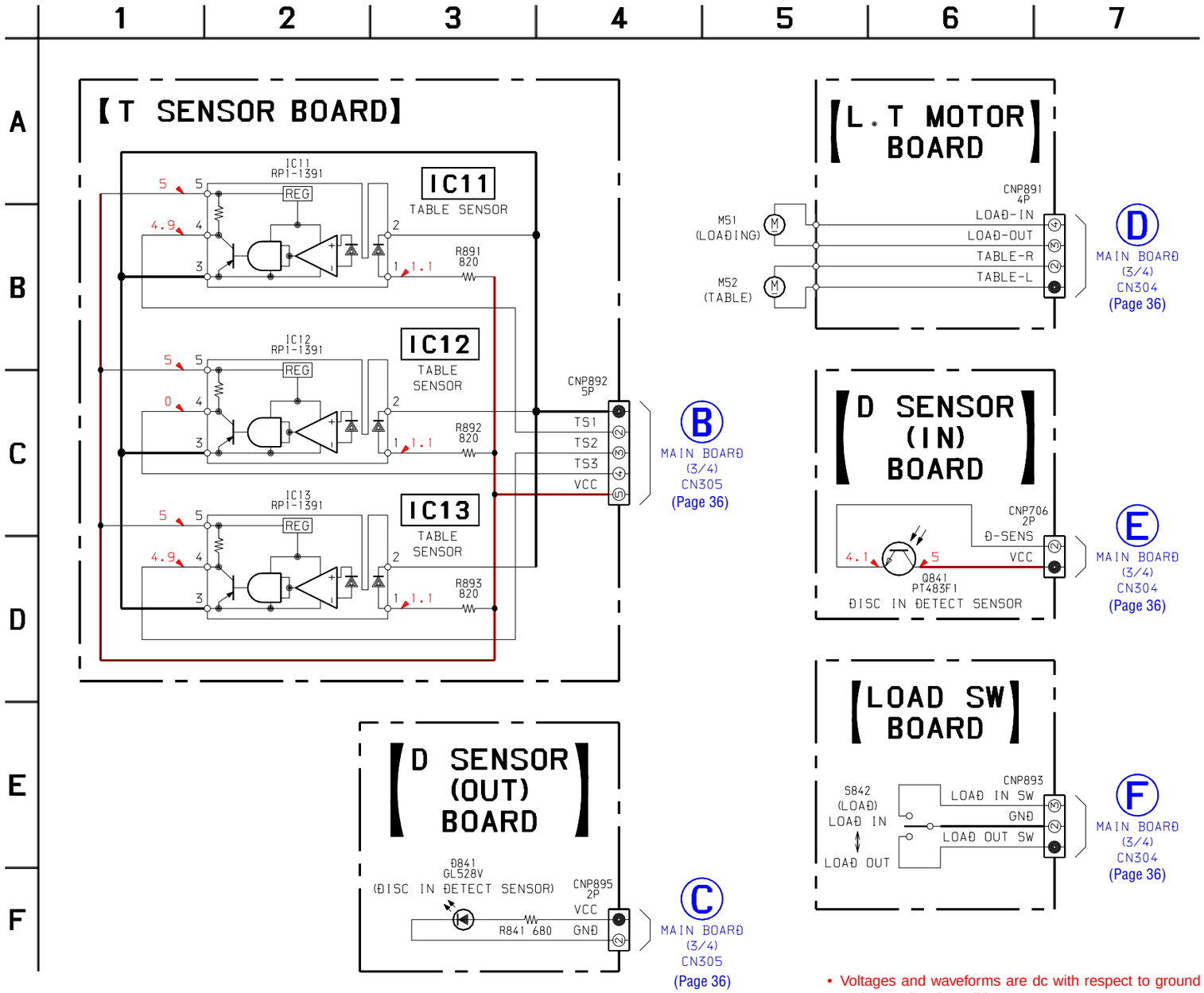
Ref. No.	Location
D101	D-3
IC101	C-2
IC102	B-3
IC103	C-2
Q101	B-1
Q102	D-3

7-9. PRINTED WIRING BOARDS – CD MOTOR/SENSOR Section –

• See page 26 for Circuit Boards Location.

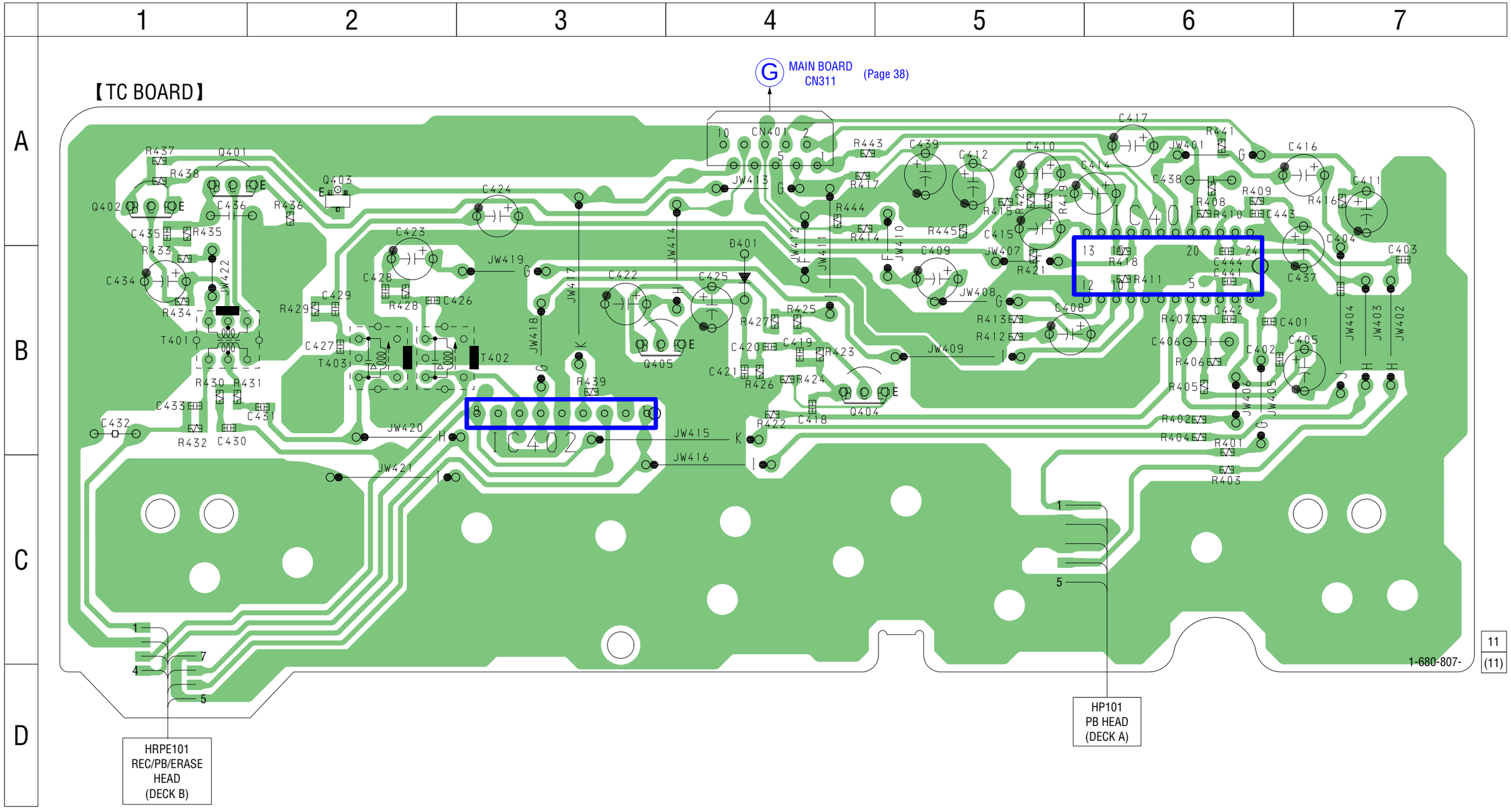


7-10. SCHEMATIC DIAGRAM – CD MOTOR/SENSOR Section –



- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD

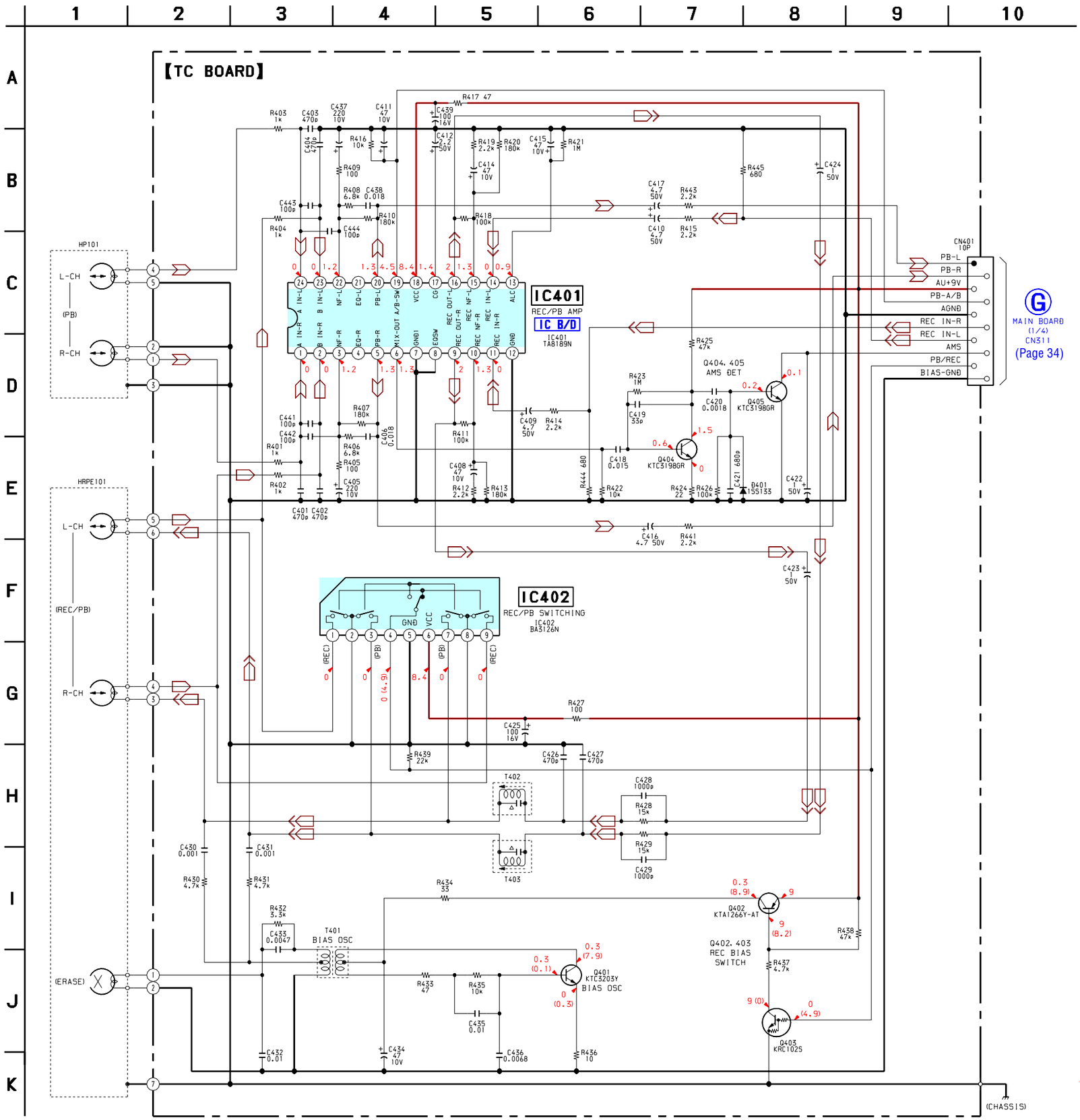
7-11. PRINTED WIRING BOARD – TC Section – • See page 26 for Circuit Boards Location.



- **Semiconductor Location**

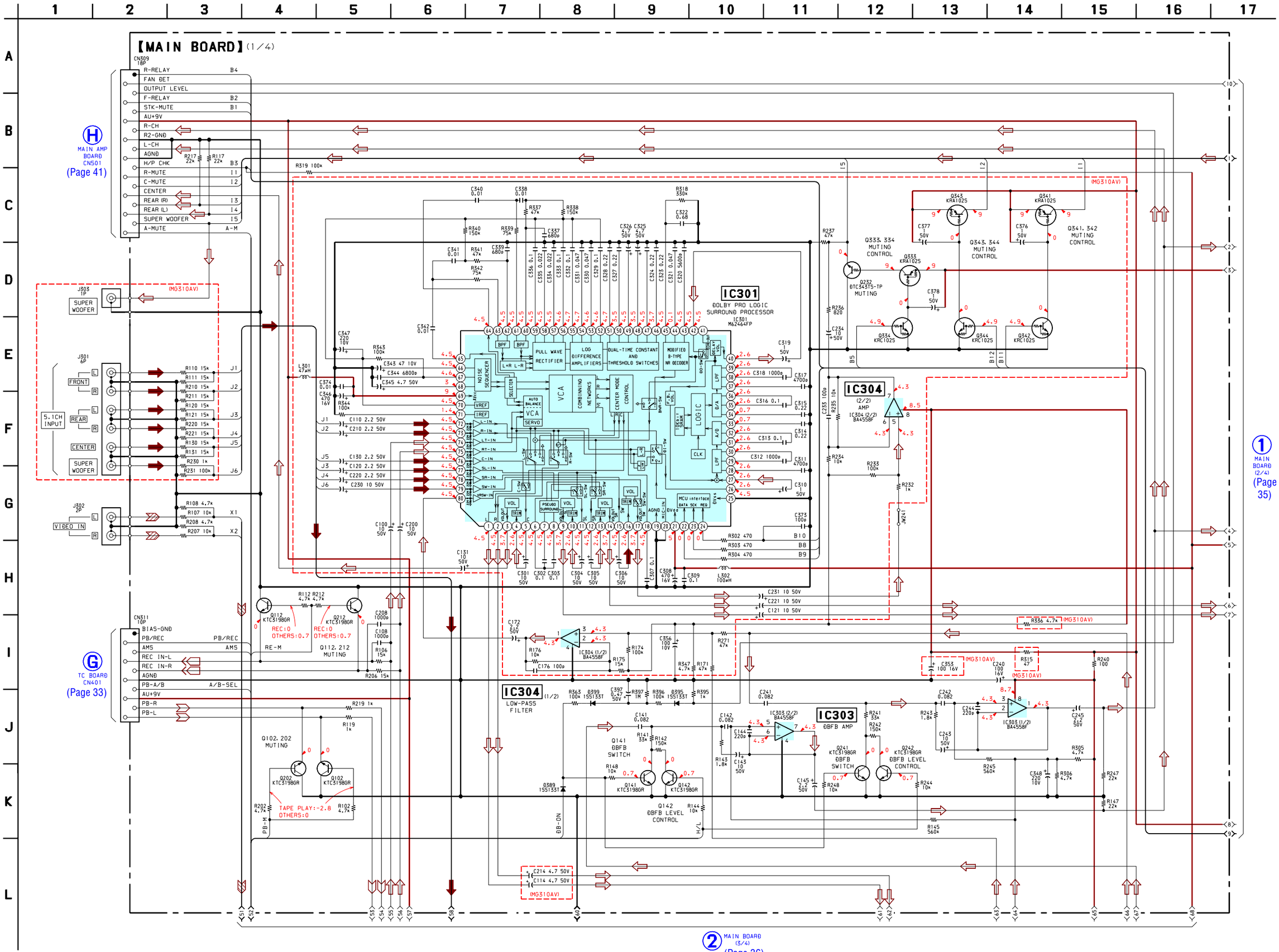
Ref. No.	Location
D401	B-4
IC401	B-6
IC402	B-3
Q401	A-1
Q402	A-1
Q403	A-2
Q404	B-4
Q405	B-3

7-12. SCHEMATIC DIAGRAM – TC Section – • See page 39 for IC Block Diagram.



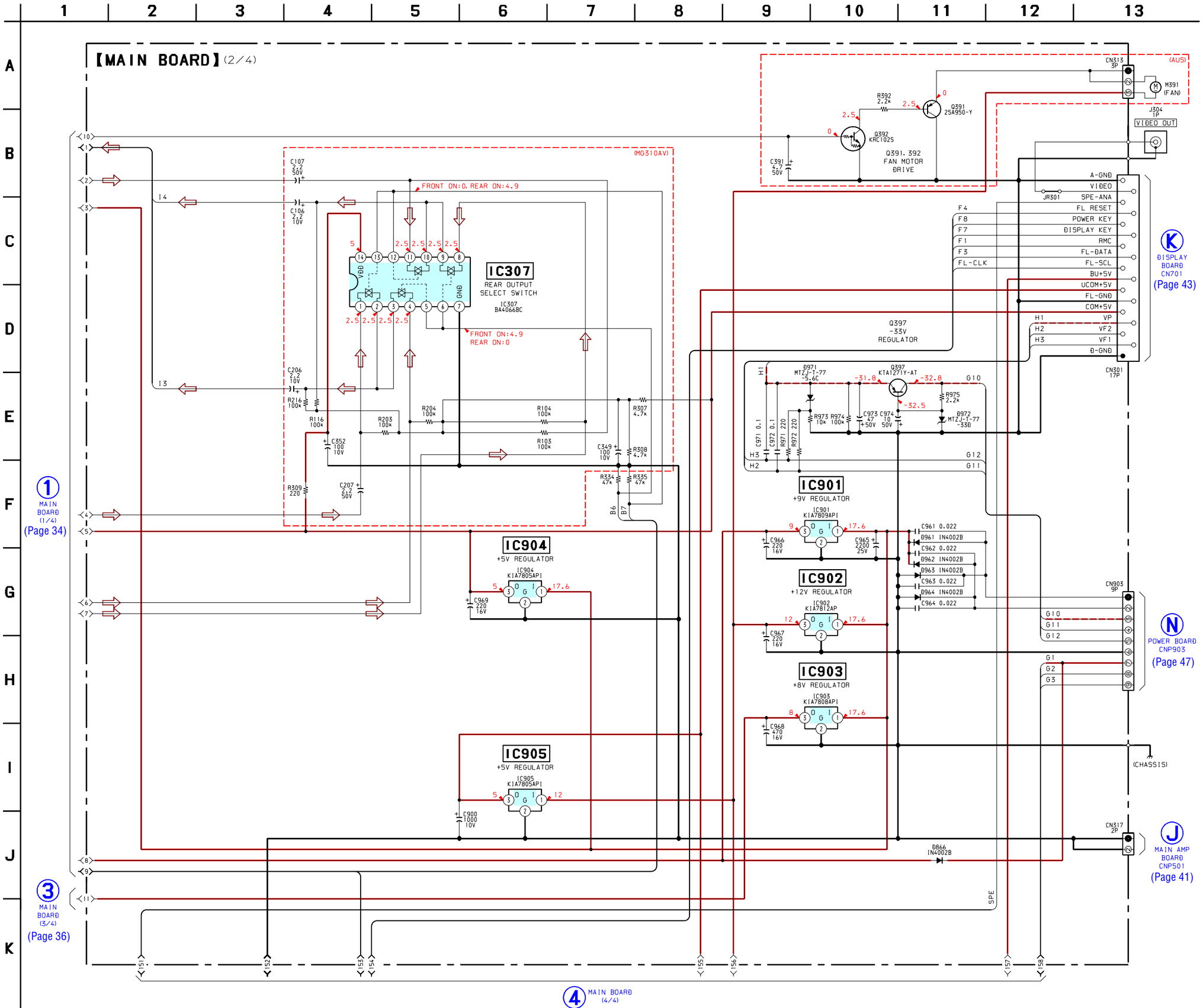
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : TAPE PLAY
  ( ) : REC

7-13. SCHEMATIC DIAGRAM – MAIN Section (1/4) –



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

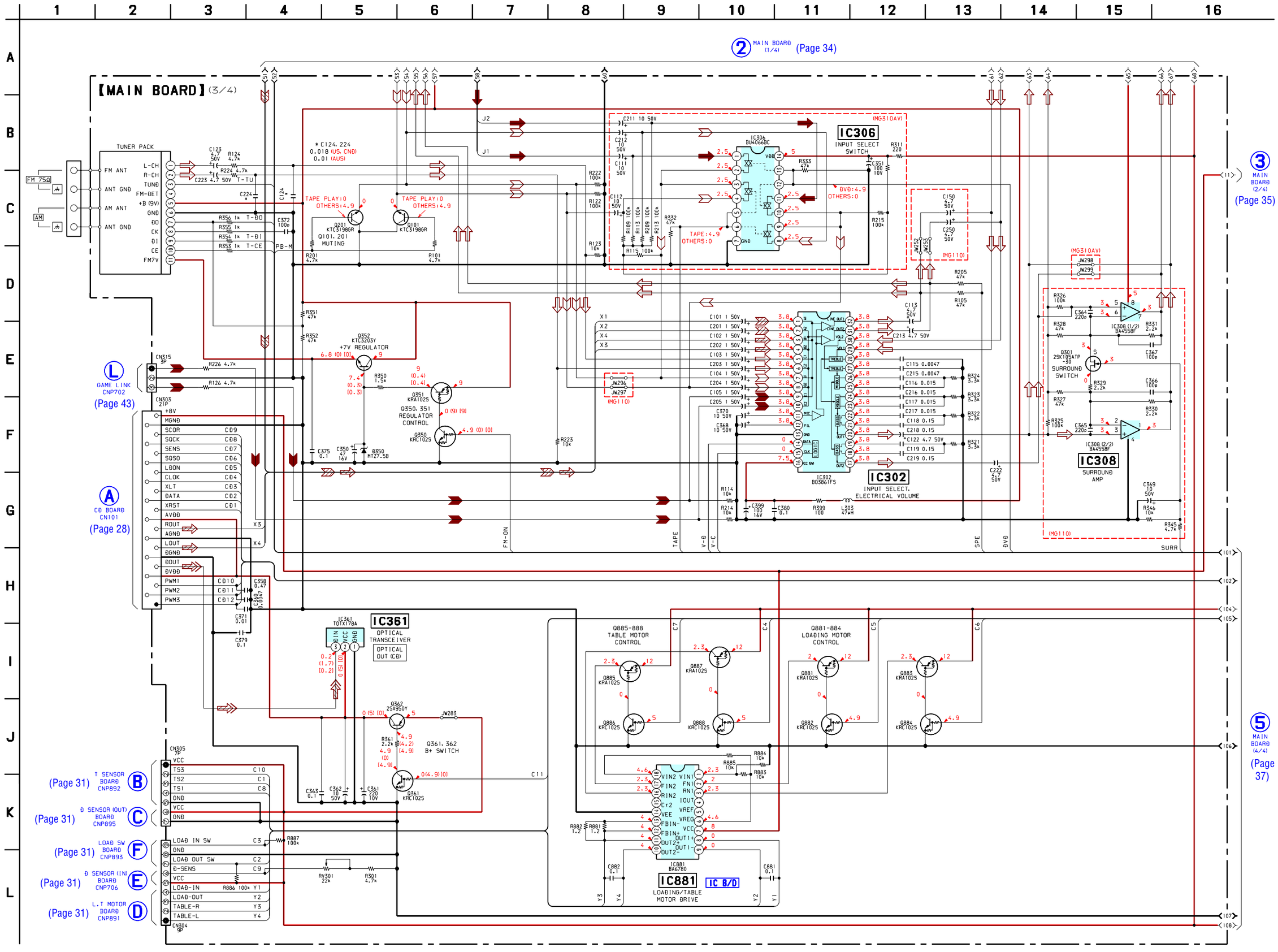
7-14. SCHEMATIC DIAGRAM – MAIN Section (2/4) –



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

7-15. SCHEMATIC DIAGRAM – MAIN Section (3/4) –

• See page 39 for IC Block Diagram.



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : CD PLAY
  [ ] : TAPE PLAY

7-16. SCHEMATIC DIAGRAM – MAIN Section (4/4) – • See page 39 for Waveforms.

【MAIN BOARD】(4/4)

④ MAIN BOARD (2/4) (Page 35)

⑤ MAIN BOARD (3/4) (Page 36)

Ⓜ H/P BOARD CNP503 (Page 41)

IC801
SYSTEM CONTROLLER
IC801
M30622MGA-A42FP (US, CND)
M30622MGA-A68FP (AUS)

IC802
RESET SIGNAL GENERATOR
IC802 PST592C

IC803
LEVEL SHIFT
IC803 MC74VHCT04ADTR2

Q802, 803 +5.6V REGULATOR

Q381, 382 CAPSTAN MOTOR DRIVE

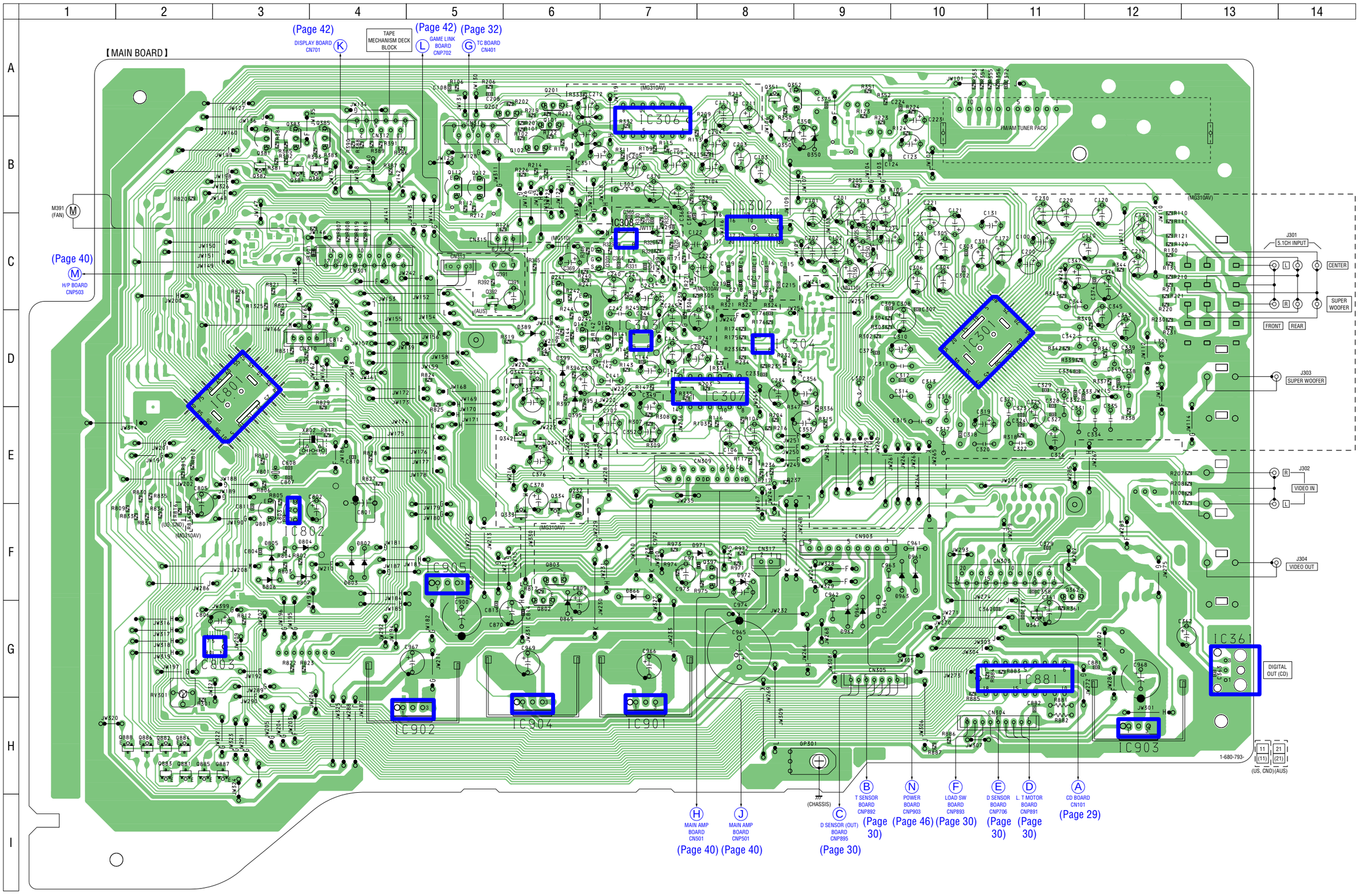
Q383, 384 TRIGGER PLUNGER DRIVE (DECK A)

Q385, 386 TRIGGER PLUNGER DRIVE (DECK B)

TAPE MECHANISM ĐECK BLOCK

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : CD PLAY
  [ ] : TAPE PLAY
  * : Impossible to measure

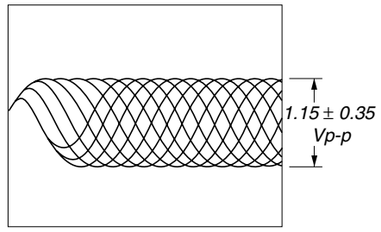
7-17. PRINTED WIRING BOARD – MAIN Section – • See page 26 for Circuit Boards Location.



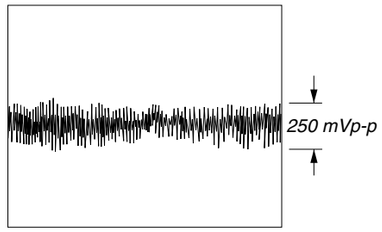
• **Waveforms**

– CD Board –

❶ IC103 ⑮ (RFAC) (CD Play Mode)

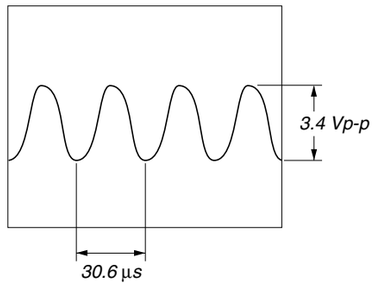


❹ IC101 ㊶ (TE) (CD Play Mode)

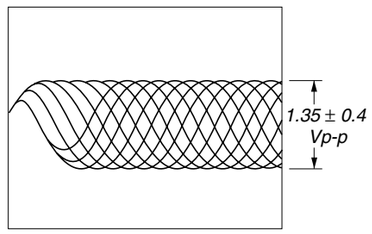


– MAIN Board –

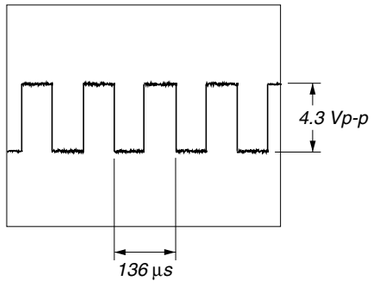
⓫ IC801 ⑪ (SUBXOUT)



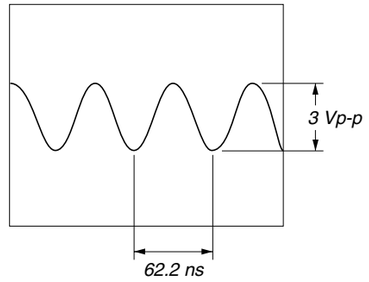
❷ IC101 ㊸ (RFDC) (CD Play Mode)



❺ IC101 ⑮ (WFCK) (CD Play Mode)

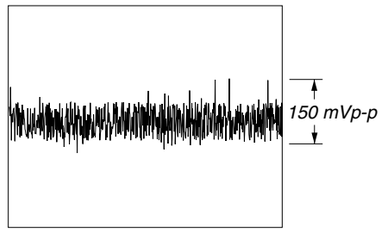


⓬ IC801 ⑬ (XOUT)

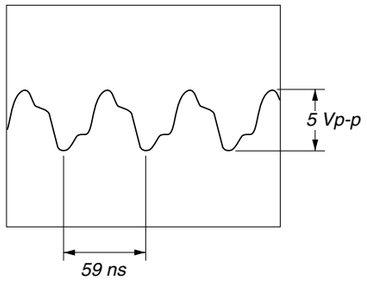


– DISPLAY Board –

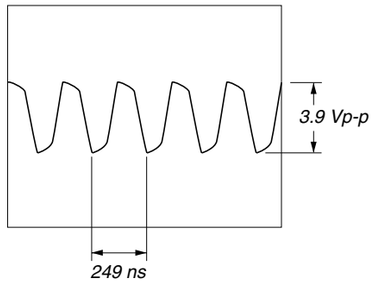
❸ IC101 ㊴ (FE) (CD Play Mode)



❻ IC101 ㊼ (XTAO)



⓭ IC701 ㊸ (X1)

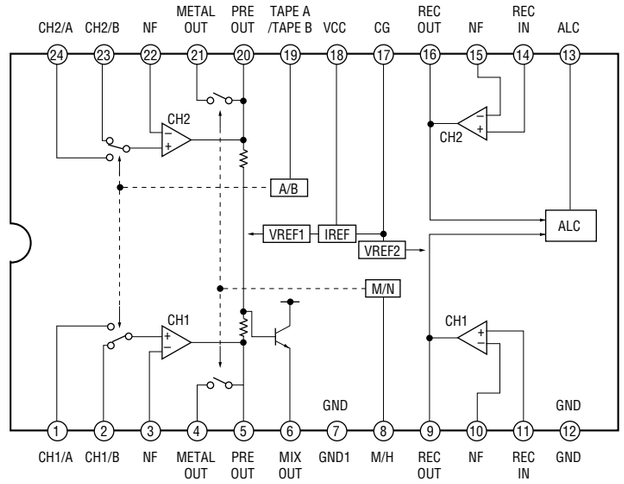


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D350	B-9	IC302	C-8	Q141	D-7	Q381	B-3
D389	D-6	IC303	D-7	Q142	D-6	Q382	B-3
D395	D-6	IC304	D-8	Q201	A-6	Q383	B-3
D399	D-6	IC306	B-7	Q202	A-6	Q384	B-3
D802	F-4	IC307	D-8	Q212	B-5	Q385	B-4
D803	F-4	IC308	C-7	Q232	F-6	Q386	B-4
D804	F-3	IC361	G-13	Q241	C-6	Q391	C-5
D805	F-3	IC801	D-3	Q242	C-6	Q392	C-5
D806	F-3	IC802	F-3	Q301	C-6	Q397	F-8
D807	F-3	IC803	G-3	Q333	F-6	Q801	F-3
D961	F-10	IC881	G-11	Q334	F-6	Q802	F-6
D962	G-9	IC901	H-7	Q341	E-6	Q803	F-6
D963	F-10	IC902	H-5	Q342	E-6	Q881	H-2
D964	G-9	IC903	H-12	Q343	D-6	Q882	H-2
D865	G-6	IC904	H-6	Q344	D-6	Q883	H-2
D866	F-7	IC905	F-5	Q350	B-8	Q884	H-2
D971	F-8			Q351	A-8	Q885	H-2
D972	F-8	Q101	B-6	Q352	A-9	Q886	H-2
		Q102	B-6	Q361	G-11	Q887	H-3
IC301	D-10	Q112	B-5	Q362	F-11	Q888	H-2

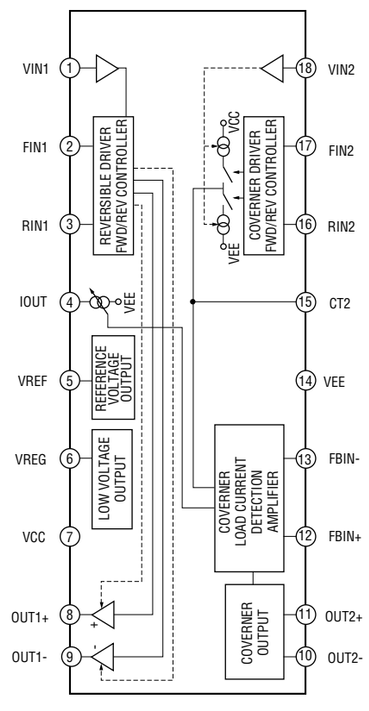
– TC Board –

IC401 TA8189N



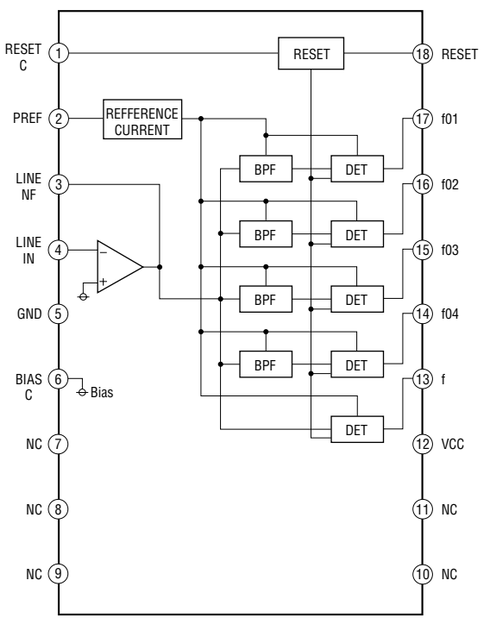
– MAIN Board –

IC881 BA6780



– DISPLAY Board –

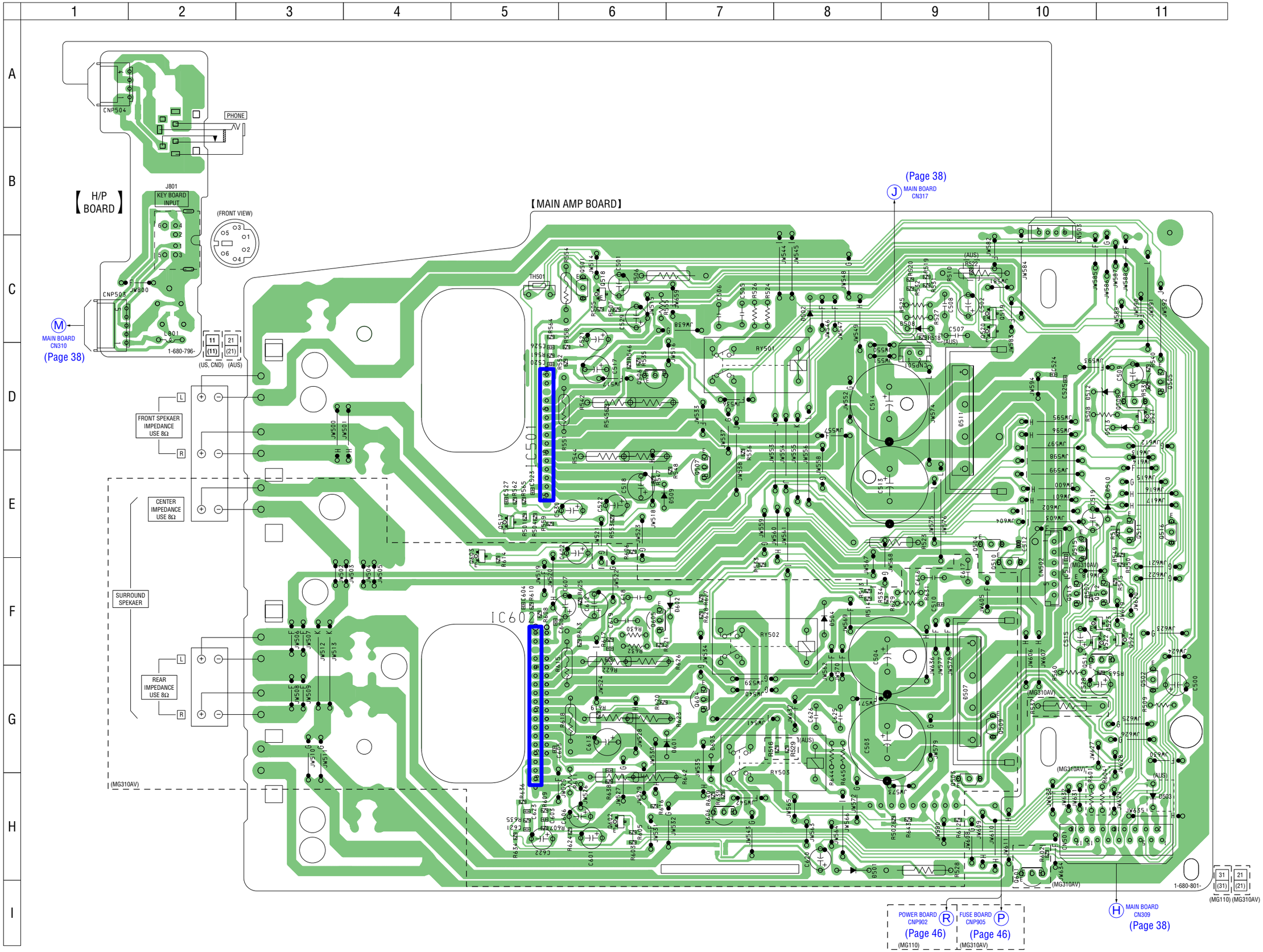
IC703 BA3833FP-E2



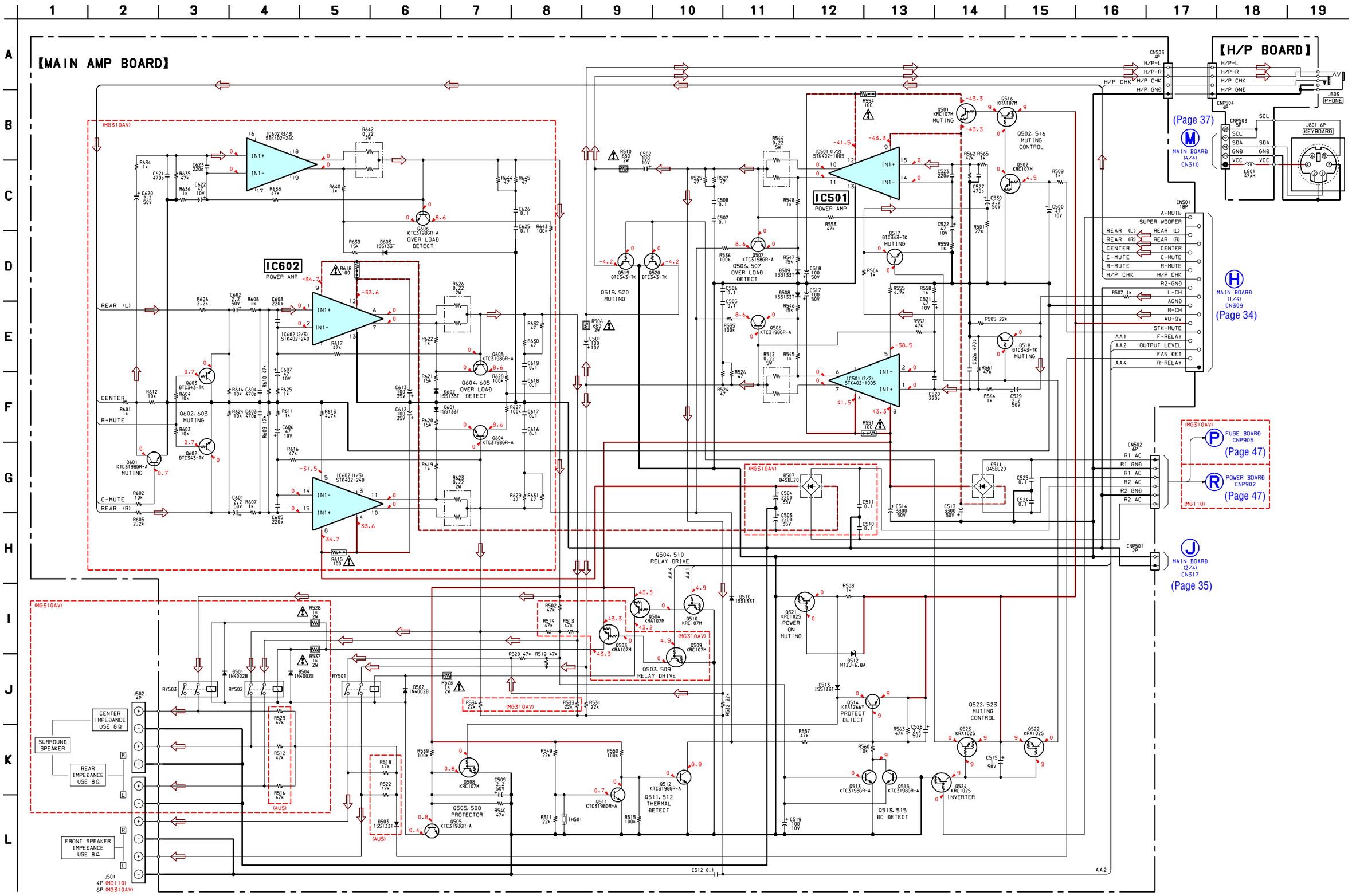
7-18. PRINTED WIRING BOARDS – AMP Section – • See page 26 for Circuit Boards Location.

- **Semiconductor Location**

Ref. No.	Location
D501	H-8
D502	C-8
D503	H-11
D504	F-8
D507	G-9
D508	C-9
D509	E-6
D510	E-11
D511	D-9
D512	D-11
D513	D-11
D601	G-7
D602	F-7
D603	G-7
IC501	D-5
IC602	G-5
Q501	C-6
Q502	G-11
Q503	H-9
Q504	E-10
Q505	D-11
Q506	D-6
Q507	E-7
Q508	D-11
Q509	G-10
Q510	F-10
Q511	D-11
Q512	F-11
Q513	F-10
Q514	F-11
Q515	E-10
Q516	D-11
Q517	E-5
Q518	C-6
Q519	C-10
Q520	C-10
Q521	D-11
Q522	F-11
Q523	F-11
Q524	F-11
Q601	H-10
Q602	H-6
Q603	E-5
Q604	G-7
Q605	F-6
Q606	H-7



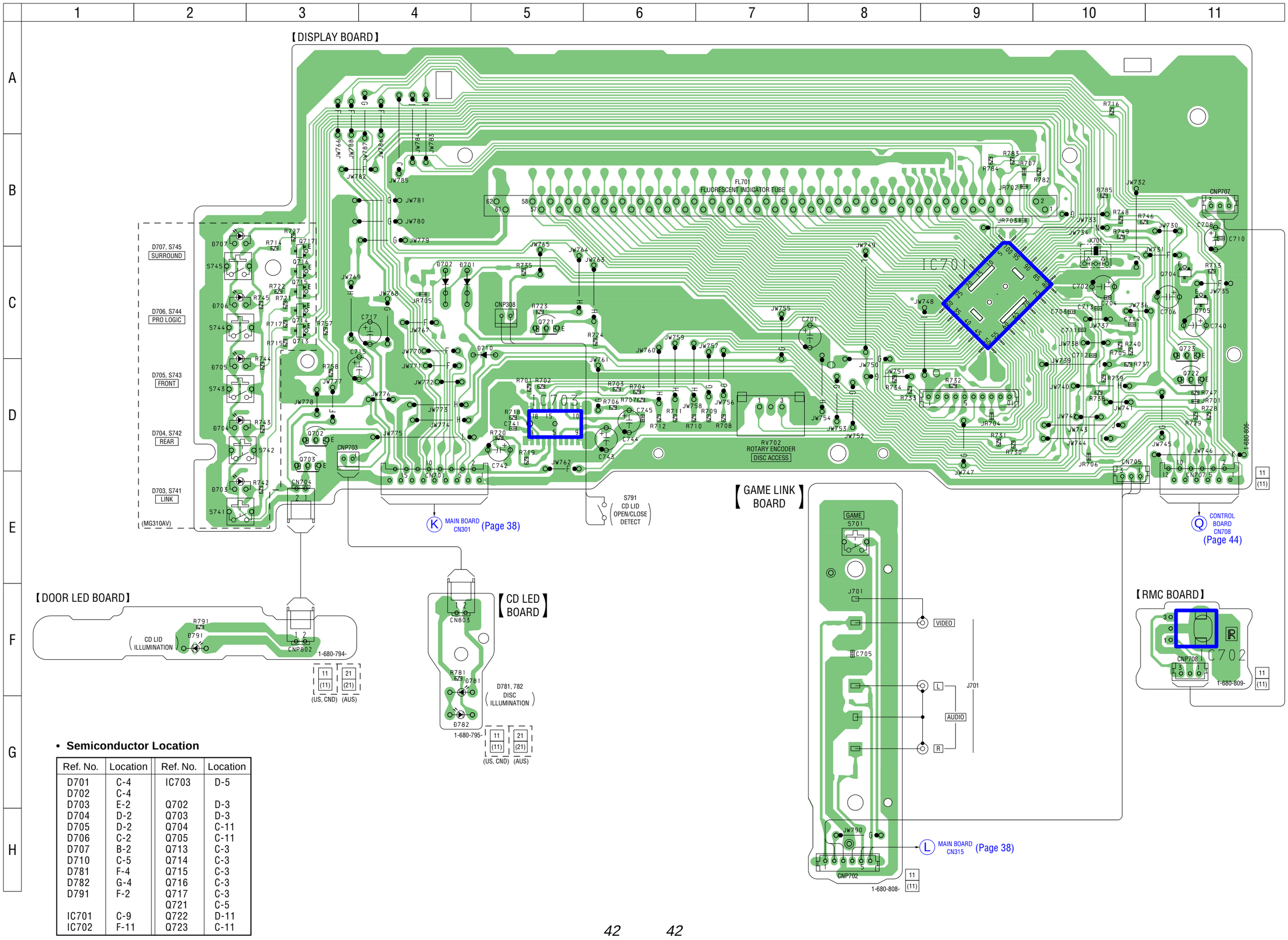
7-19. SCHEMATIC DIAGRAM – AMP Section –



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

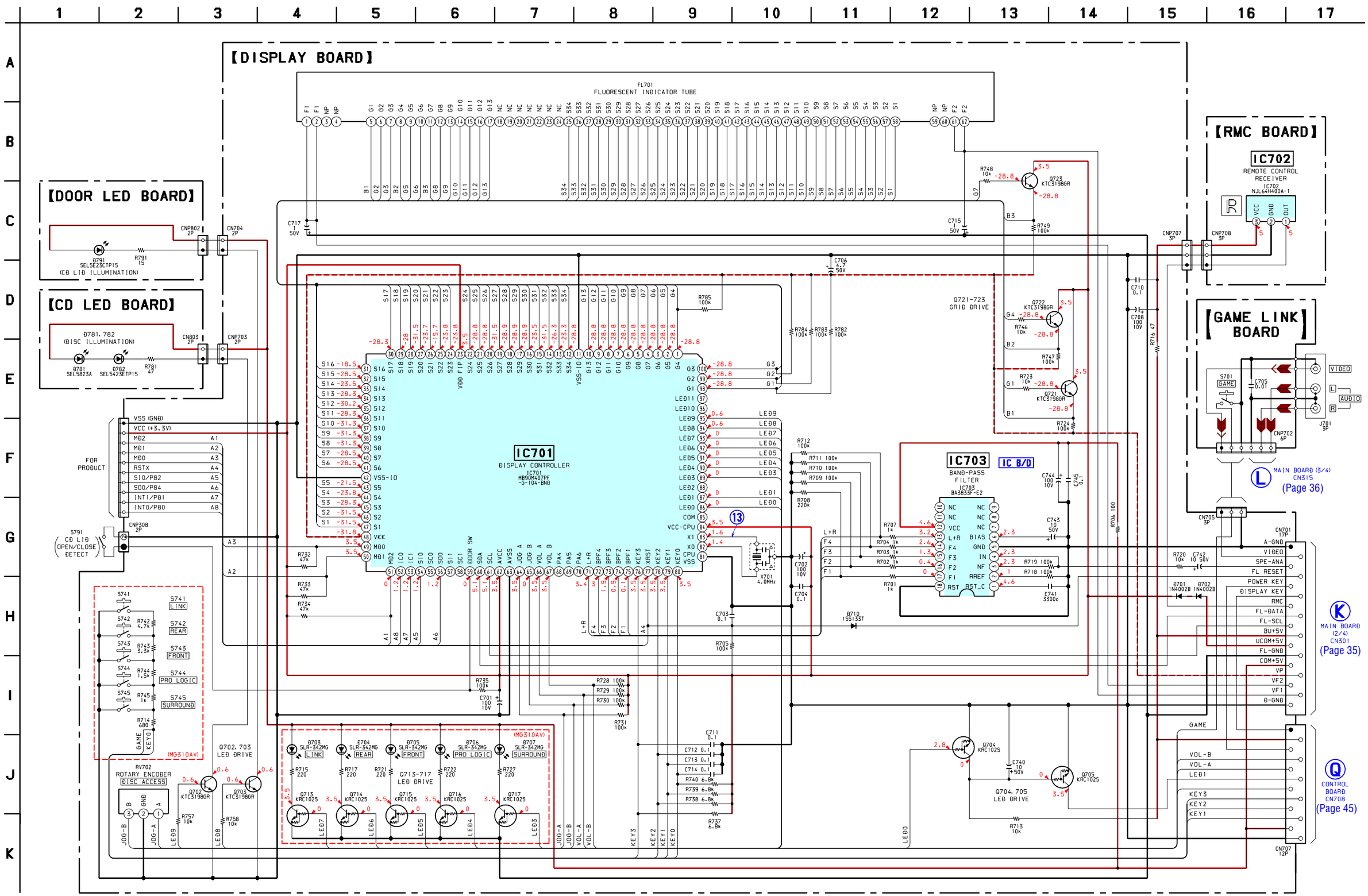
7-20. PRINTED WIRING BOARDS – DISPLAY Section – • See page 26 for Circuit Boards Location.



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D701	C-4	IC703	D-5
D702	C-4		
D703	E-2	Q702	D-3
D704	D-2	Q703	D-3
D705	D-2	Q704	C-11
D706	C-2	Q705	C-11
D707	B-2	Q713	C-3
D710	C-5	Q714	C-3
D781	F-4	Q715	C-3
D782	G-4	Q716	C-3
D791	F-2	Q717	C-3
		Q721	C-5
IC701	C-9	Q722	D-11
IC702	F-11	Q723	C-11

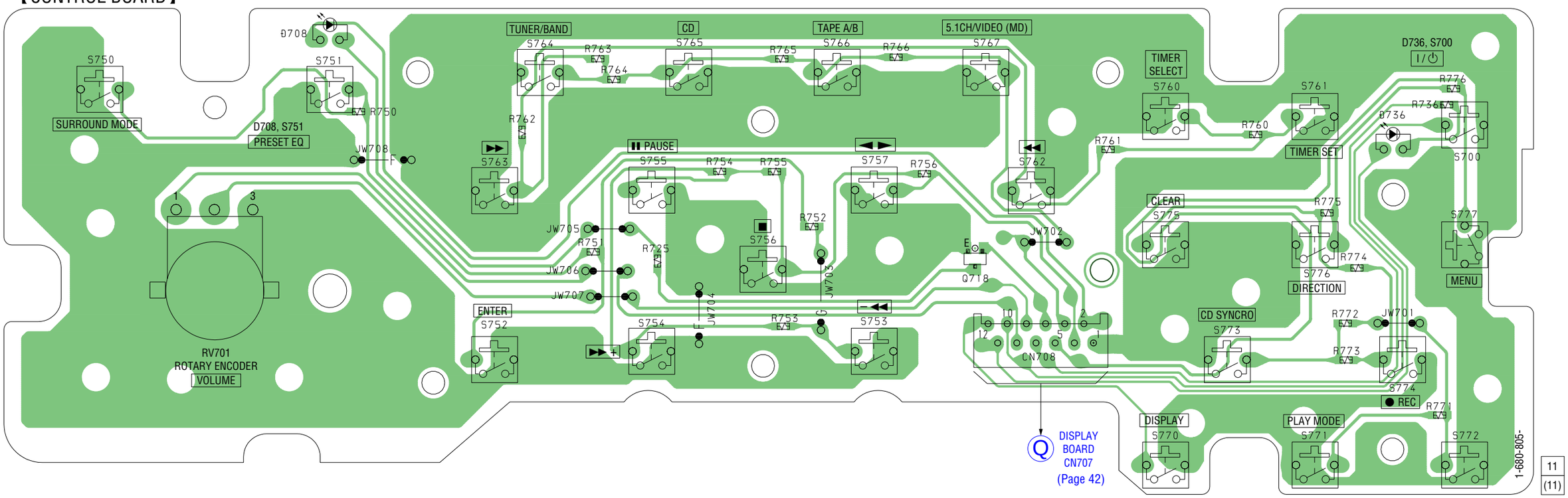
7-21. SCHEMATIC DIAGRAM – DISPLAY Section – • See page 39 for Waveform. • See page 39 for IC Block Diagram.



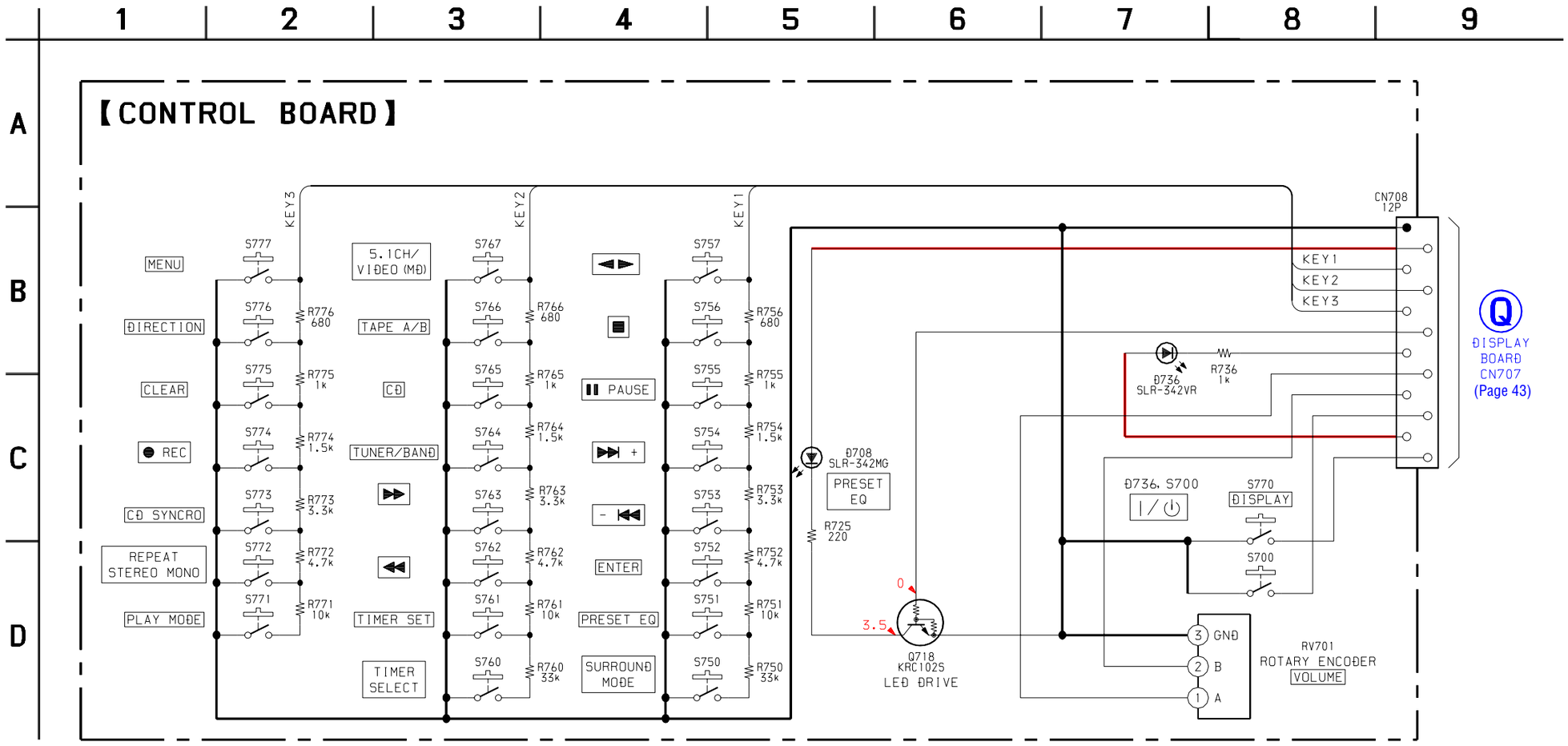
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

7-22. PRINTED WIRING BOARD – CONTROL Section – • See page 26 for Circuit Boards Location.

【CONTROL BOARD】



7-23. SCHEMATIC DIAGRAM – CONTROL Section –



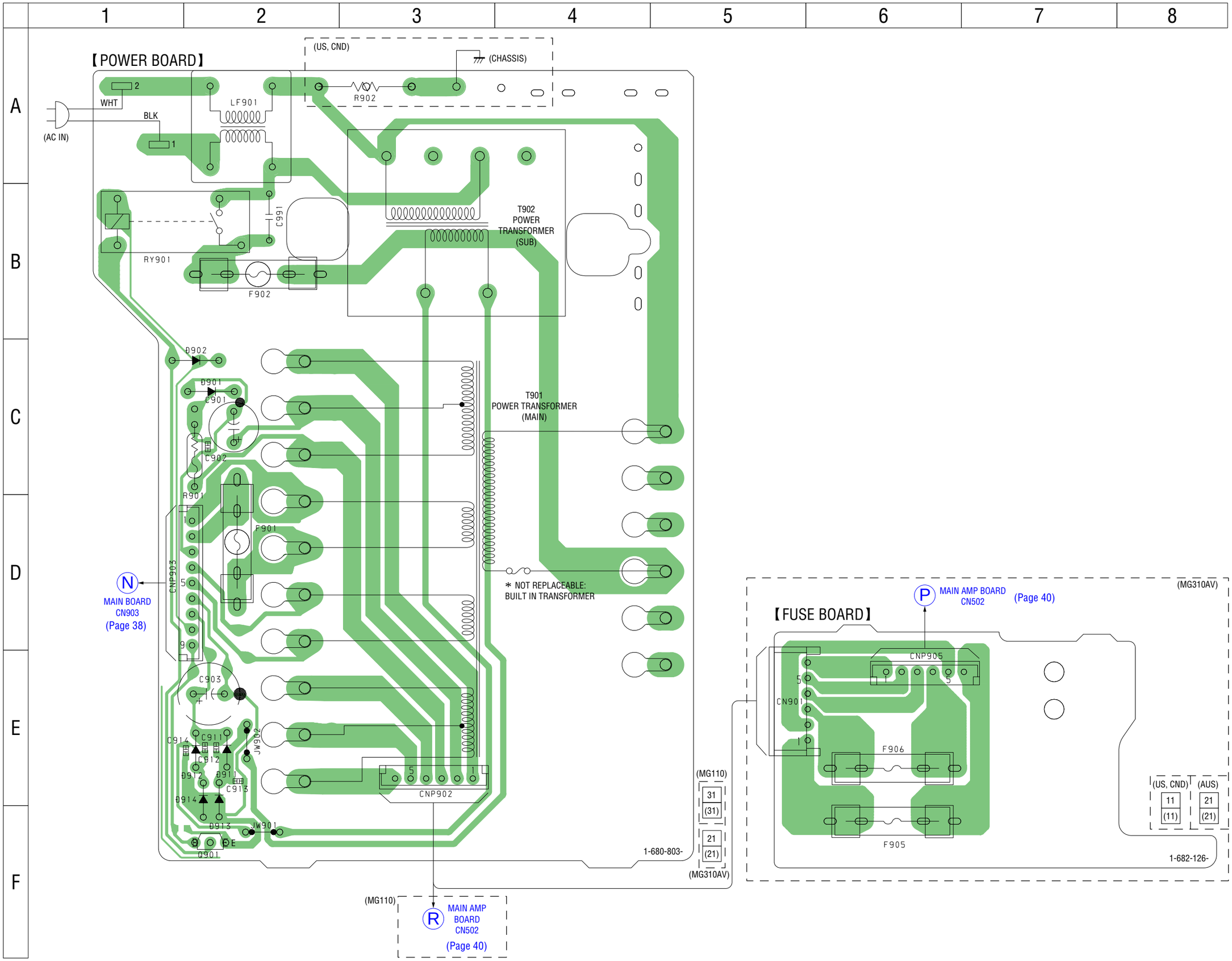
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

7-24. PRINTED WIRING BOARDS – POWER Section –

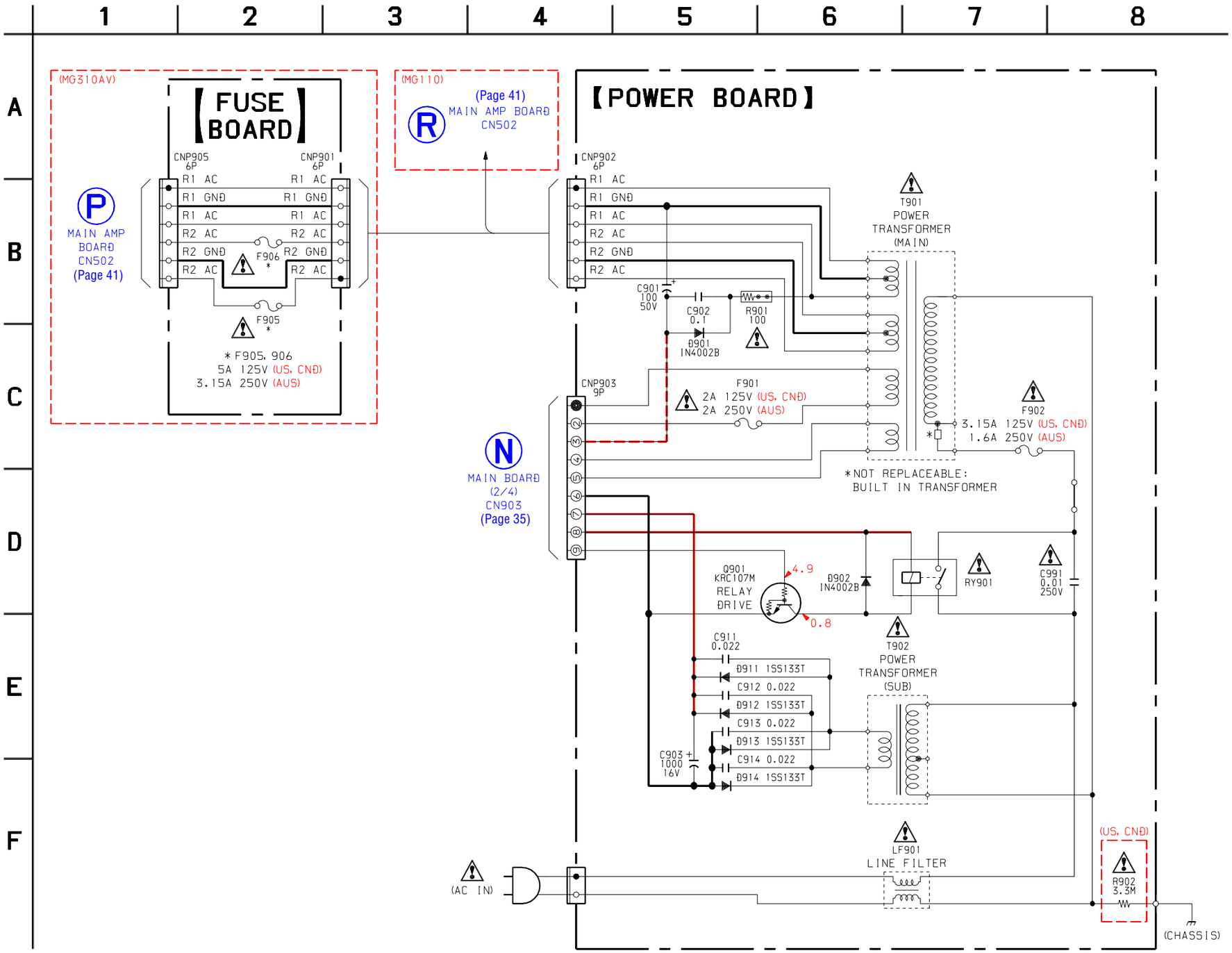
• See page 26 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D901	C-2
D902	C-2
D911	E-2
D912	E-2
D913	E-2
D914	E-2
Q901	F-2



7-25. SCHEMATIC DIAGRAM – POWER Section –



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-26. IC PIN FUNCTION DESCRIPTION

- **CD BOARD IC101 CXD3017Q**
  (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, DIGITAL FILTER, D/A CONVERTER)

Pin No.	Pin Name	I/O	Description
1	SQSO	O	Subcode Q data output to the system controller (IC801)
2	SQCK	I	Subcode Q data reading clock signal input from the system controller (IC801)
3	XRST	I	System reset signal input from the system controller (IC801) “L”: reset
4	SYSM	I	Analog line muting on/off control signal input terminal “H”: line muting on Not used (fixed at “L”)
5	DATA	I	Command serial data input from the system controller (IC801)
6	XLAT	I	Command latch pulse input from the system controller (IC801)
7	CLOK	I	Command serial data transfer clock signal input from the system controller (IC801)
8	SENS	O	Internal status monitor output to the system controller (IC801)
9	SCLK	I	SENSE serial data reading clock input from the system controller (IC801)
10	VDD	—	Power supply terminal (+5V) (digital system)
11	ATSK	I/O	Input pin for anti-shock Not used (fixed at “L”)
12	SPOA	I	Microcomputer escape interface input A terminal Not used (fixed at “L”)
13	SPOB	I	Microcomputer escape interface input B terminal Not used (fixed at “L”)
14	XLON	O	Microcomputer escape interface output terminal Not used (open)
15	WFCK	O	WFCK output terminal Not used (open)
16	XUGF	O	Not used (open)
17	XPCK	O	Not used (open)
18	GFS	O	Not used (open)
19	C2PO	O	Not used (open)
20	SCOR	O	Subcode sync (S0+S1) detection signal output to the system controller (IC801)
21	COUT	I/O	Numbers of track counted signal input/output terminal Not used (open)
22	MIRR	I/O	Mirror signal input/output terminal Not used (open)
23	DFCT	I/O	Defect signal input/output terminal Not used (open)
24	FOK	I/O	Focus OK input/output terminal Not used (open)
25	LOCK	I/O	GFS is sampled by 460 Hz “H” when GFS is “H” Not used (open)
26	MDP	O	Spindle motor (M101) servo drive signal output to the BA5974FP (IC102)
27	SSTP	I	Limit in detect switch (S101) input terminal
28	SFDR	O	Sled servo drive PWM signal (+) output to the BA5974FP (IC102)
29	SRDR	O	Sled servo drive PWM signal (–) output to the BA5974FP (IC102)
30	TFDR	O	Tracking servo drive PWM signal (+) output to the BA5974FP (IC102)
31	TRDR	O	Tracking servo drive PWM signal (–) output to the BA5974FP (IC102)
32	FFDR	O	Focus servo drive PWM signal (+) output to the BA5974FP (IC102)
33	FRDR	O	Focus servo drive PWM signal (–) output to the BA5974FP (IC102)
34	VSS	—	Ground terminal (digital system)
35	TEST	I	Input terminal for the test (fixed at “L”)
36	TES1	I	Input terminal for the test (fixed at “L”)
37	XTSL	I	Input terminal for the system clock frequency setting “L”: 45.1584 MHz, “H”: 22.5792 MHz (fixed at “L” in this set)
38	VC	I	Middle point voltage (+2.5V) input from the CXA2581N (IC103)
39	FE	I	Focus error signal input from the CXA2581N (IC103)
40	SE	I	Sled error signal input from the CXA2581N (IC103)
41	TE	I	Tracking error signal input from the CXA2581N (IC103)
42	CE	I	Command chip enable signal input from the CXA2581N (IC103)

Pin No.	Pin Name	I/O	Description
43	RFDC	I	RF signal input from the CXA2581N (IC103)
44	ADIO	O	Monitor output of the A/D converter input signal Not used (open)
45	AVSS0	—	Ground terminal (digital system)
46	IGEN	I	Stabilized current input for operational amplifiers
47	AVDD0	—	Power supply terminal (+5V) (digital system)
48	ASYO	O	Playback EFM full-swing output terminal
49	ASYI	I	Playback EFM asymmetry comparator voltage input terminal
50	BIAS	I	Playback EFM asymmetry circuit constant current input terminal
51	RFAC	I	EFM signal input from the CXA2581N (IC103)
52	AVSS3	—	Ground terminal (digital system)
53	CLTV	I	Internal VCO control voltage input of the playback master PLL
54	FILO	O	Filter output for master clock of the playback master PLL
55	FILI	I	Filter input for master clock of the playback master PLL
56	PCO	O	Phase comparison output for master clock of the playback EFM master PLL
57	AVDD3	—	Power supply terminal (+5V) (digital system)
58	VSS	—	Ground terminal (digital system)
59	VDD	—	Power supply terminal (+5V) (digital system)
60	DOUT	O	Digital audio signal output to the DIGITAL OUT (CD) (IC361)
61	LRCK	O	L/R sampling clock signal (44.1 kHz) output terminal Not used (open)
62	PCMD	O	D/A interface serial data output terminal Not used (open)
63	BCK	O	Bit clock signal (2.8224 MHz) output terminal Not used (open)
64	EMPH	O	De-emphasis control signal output terminal Not used (open)
65	XVDD	—	Power supply terminal (+5V) (crystal oscillator system)
66	XTAI	I	System clock input terminal (16.9344 MHz)
67	XTAO	O	System clock output terminal (16.9344 MHz)
68	XVSS	—	Ground terminal (crystal oscillator system)
69	AVDD1	—	Power supply terminal (+5V) (analog system)
70	AOUT1	O	L-ch analog audio signal output terminal
71	AIN1	I	L-ch operational amplifiers input terminal
72	LOUT1	O	L-ch line output terminal
73	AVSS1	—	Ground terminal (analog system)
74	AVSS2	—	Ground terminal (analog system)
75	LOUT2	O	R-ch line output terminal
76	AIN2	I	R-ch operational amplifiers input terminal
77	AOUT2	O	R-ch analog audio signal output terminal
78	AVDD2	—	Power supply terminal (+5V) (analog system)
79	RMUT	O	R-ch line muting on/off control signal output terminal Not used (open)
80	LMUT	O	L-ch line muting on/off control signal output terminal Not used (open)

• **MAIN BOARD IC801 M30622MGA-A42FP (SYSTEM CONTROLLER) (US, Canadian models)**
M30622MGA-A68FP (SYSTEM CONTROLLER) (Australian model)

Pin No.	Pin Name	I/O	Description
1	NC	—	Not used (open)
2	LOAD POS	O	Loading motor drive signal (load-out direction) output the motor driver (IC881)
3	LOAD NEG	O	Loading motor drive signal (load-in direction) output the motor driver (IC881)
4	RMC	I	Remote control signal input from the remote control receiver (IC702)
5	TABLE POS	O	Table motor drive signal (counterclockwise) output to the motor driver (IC881)
6	$\overline{\text{LOAD IN SW}}$	I	Load in/out detect switch (S842) input "L": load in
7	$\overline{\text{LOAD OUT SW}}$	I	Load in/out detect switch (S842) input "L": load out
8	—	—	Not used (fixed at "L")
9	CNVSS	—	Not used
10	SUBXIN	I	Sub system clock input terminal (32.768 kHz)
11	SUBXOUT	O	Sub system clock output terminal (32.768 kHz)
12	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC802) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT	O	Main system clock output terminal (16 MHz)
14	VSS	—	Ground terminal
15	XIN	I	Main system clock input terminal (16 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NC	—	Not used (fixed at "H")
18	T-SENS2	I	Table position sensor (IC13) input terminal
19	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD3017Q (IC101)
20	KB-SCL	O	Serial data transfer clock signal output to the KEYBOARD (J801)
21	C-MUTE	O	Muting on/off control signal output terminal "H": muting (center speaker) (MG310AV only)
22	PWM1	O	Focus servo drive PWM signal output to the CXA2581N (IC103)
23	R-MUTE	O	Muting on/off control signal output terminal "H": muting (rear speakers) (MG310AV only)
24	PWM2	O	PWM signal output to the CXA2581N (IC103)
25	PL-RQ	O	Serial data latch pulse output to the M62464FP (IC401) (MG310AV only)
26	PWM3	O	RFDC PWM signal output to the CXA2581N (IC103)
27	PL-DATA	O	Serial data output to the M62464FP (IC401) (MG310AV only)
28	PL-CLK	O	Serial data transfer clock signal output to the M62464FP (IC401) (MG310AV only)
29	IIC CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the display controller (IC701)
30	IIC DATA	I/O	Communication data bus with the display controller (IC701)
31	NC	—	Not used
32	C-SQSO	I	Subcode Q data input from the CXD3017Q (IC101)
33	C-SQCK	O	Subcode Q data reading clock signal output to the CXD3017Q (IC101)
34	FRONT	O	Selection signal output of the rear speaker output signal to the BU4066BC (IC307) "H": Same the front channel (MG310AV only)
35	REAR	O	Selection signal output of the rear speaker output signal to the BU4066BC (IC307) "H": Rear channel (MG310AV only)
36	KB-SDA	I	Keyboard data input from the KEYBOARD (J801)
37	KB-CTRL	O	Keyboard control signal output to the KEYBOARD (J801)
38	S/W MUTE	O	Muting on/off control signal output terminal "H": muting (super woofer) (MG310AV only)
39	NC	—	Not used (open)
40	R-RELAY	O	Relay drive signal output for the surround speaker (rear and center) protection "H": on (MG310AV only)
41	NC	—	Not used (fixed at "L")

Pin No.	Pin Name	I/O	Description
42	POWER STBY	O	Standby relay drive signal output terminal "L": standby, "H": power on
43	FL RESET	O	Reset signal output to the display controller (IC701)
44	A-MUTE	O	Audio muting on/off control signal output terminal "H": muting
45	HP-CHK	I	Headphone detection signal input terminal "H": headphone on
46	NC	—	Not used (fixed at "H")
47	DBFB-ON	O	DBFB on/off control signal output terminal "H": DBFB on
48	DBFB-H/L	O	DBFB normal/high selection signal output terminal "L": DBFB high, "H": DBFB normal
49	SURROUND	O	Surround mode on/off control signal output terminal (MG110 only)
50	REC-MUTE	O	Recording muting on/off control signal output terminal "H": muting on
51	V-DATA	O	Serial data output to the BD3861FS (IC302)
52	V-CLK	O	Serial data transfer clock signal output to the BD3861FS (IC302)
53	PB-A/B	O	Deck-A/B selection signal output to the REC/PB amp (IC401) "L": deck-B, "H": deck-A
54	PB/REC	O	PB/REC selection signal output to the REC/PB switch (IC402) "L": PB, "H": REC
55	F-RELAY	O	Relay drive signal output for the front speaker protection "H": on
56	B-PLAY	I	Detection input from the deck-B play detect switch in the tape mechanism deck section "L": deck-B play
57	V-MUTE	O	Video muting on/off control signal output terminal Not used (open)
58	MO-ON	O	Capstan motor on/off control signal output terminal "H": on
59	A-TRIG	O	Deck-A trigger plunger drive signal output terminal "H": trigger plunger on
60	B-TRIG	O	Deck-B trigger plunger drive signal output terminal "H": trigger plunger on
61	B-PLAY	I	Detection input from the deck-B play detect switch in the tape mechanism deck section "L": deck-B play
62	VCC	—	Power supply terminal (+5V)
63	NC	—	Not used (open)
64	VSS	—	Ground terminal
65	$\overline{\text{STK-MUTE}}$	O	Power amplifier on/off control signal output terminal "L": power amplifier on
66	A-HALF	I	Detection input from the deck-A cassette detect switch in the tape mechanism deck section "L": cassette in
67	AMS-IN	I	Automatic music sensor detection signal input from the REC/PB amp (IC401)
68	PB-MUTE	O	Recording muting on/off control signal output terminal "H": muting on
69	TAPE	O	Selection signal output of the input signal to the BU4066BC (IC306) "H": tape (MG310AV only)
70	DVD	O	Selection signal output of the input signal to the BU4066BC (IC306) "H": 5.1CH INPUT (MG310AV only)
71	FM-ON	O	FM on/of control signal output terminal "H": FM on
72	VCD-ON	O	VCD on/off control signal output terminal Not used (open)
73	DISPLAY KEY	I	Key input terminal DISPLAY key (S770) input
74	POWER KEY	I	Key input terminal I/⏻ key (S700) input
75	NC	—	Not used (open)
76	TU-TUNED	I	Tuning detection signal input from the FM/AM tuner pack "L": tuned, "H": detuned
77	TU-CE	O	PLL chip enable signal output to the FM/AM tuner pack
78	TU-DI	I	PLL serial data input from the FM/AM tuner pack
79	TU-CLK	O	PLL serial data transfer clock signal output to the FM/AM tuner pack
80	TU-DO	O	PLL serial data output to the FM/AM tuner pack
81	CD POWER	O	CD power on/off control signal output terminal "H": CD on
82	AC-CUT	I	AC off detection signal input from the reset signal generator (IC802)
83	C-XRST	O	Reset signal output to the CXD3017Q (IC101)

Pin No.	Pin Name	I/O	Description
84	C-SENS	I	Internal status monitor input from the CXD3017Q (IC101)
85	C-DATA	O	Command serial data output to the CXD3017Q (IC101)
86	C-LATCH	O	Command latch pulse output to the CXD3017Q (IC101)
87	C-CLK	O	Command serial data transfer clock signal output to the CXD3017Q (IC101)
88	LD ON	I	Laser diode on/off control signal output to the CXA2581N (IC103)
89	B-SHUT	I	Shut off detection signal input from the deck-B side reel pulse detector in the tape mechanism deck section
90	B-HALF	I	Detection input from the deck-B cassette detect switch in the tape mechanism deck section “L”: cassette in
91	T-SENS3	I	Table position sensor (IC12) input terminal
92	D-SENS	I	Disc detect sensor (Q841) input terminal “H”: disc in
93	T-SENS1	I	Table position sensor (IC11) input terminal
94	SPEC	I	Model specification setting terminal
95	MODEL	I	Model destination setting terminal
96	AVSS	—	Ground terminal (analog system)
97	A-SHUT	I	Shut off detection signal input from the deck-A side reel pulse detector in the tape mechanism deck section
98	VREF	I	Reference voltage (+5V) input terminal (for A/D converter)
99	AVCC	—	Power supply terminal (+5V) (for A/D conversion)
100	TABLE NEG	O	Table motor drive signal (clockwise) output to the motor driver (IC881)

• **DISPLAY BOARD IC701 MB90M407APF-G-104-BND (DISPLAY CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1 to 10	G4 to G13	O	Grid drive signal output to the fluorescent indicator tube (FL701)
11	VSS-IO	—	Ground terminal
12 to 22	S34 to S24	O	Segment drive signal output to the fluorescent indicator tube (FL701)
23	VDD-FIP	—	Power supply terminal (+3.3V)
24 to 41	S23 to S6	O	Segment drive signal output to the fluorescent indicator tube (FL701)
42	VSS-IO	—	Ground terminal
43 to 47	S5 to S1	O	Segment drive signal output to the fluorescent indicator tube (FL701)
48	VKK	—	Power supply terminal (–33V) (for fluorescent indicator tube drive)
49 to 51	MD0 to MD2	—	Not used (fixed at "H")
52, 53	IC0, IC1	—	Not used (open)
54	SI0	—	Not used (open)
55	SC0	—	Not used (open)
56	SO0	—	Not used (open)
57	SI1	—	Not used (open)
58	SC1	—	Not used (open)
59	DOOR SW	I	CD lid open/close detest switch (S791) input terminal "L": CD lid is close
60	SDA	I/O	Communication data reading clock signal input or transfer clock signal output with the system controller (IC801)
61	SCL	I/O	Communication data bus with the system controller (IC801)
62	AVCC	—	Power supply terminal (+3.3V) (for A/D converter)
63	AVSS	—	Ground terminal (for A/D conversion)
64, 65	JOG A, JOG B	I	Jog dial pulse input from the rotary encoder (RV702 DISC ACCESS)
66, 67	VOL A, VOL B	I	Jog dial pulse input from the rotary encoder (RV701 VOLUME)
68 to 70	PA4 to PA6	—	Not used (open)
71	L+R	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC703)
72 to 75	BPF4 to BPF1	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC704)
76	KEY3	I	Key input terminal (A/D input) (S771 to 777) PLAY MODE, REPEAT STEREO/MONO, CD SYNCRO, ● REC, CLEAR, DIRECTION, MENU keys input
77	XRST	I	Reset signal input from the system controller (IC801)
78	KEY2	I	Key input terminal (A/D input) (S760 to 767) TIMER SELECT, TIMER SET, ◀◀, ▶▶, TUNER/BAND, CD, TAPE A/B, 5.1CH/VIDEO (MD) keys input
79	KEY1	I	Key input terminal (A/D input) (S750 to 757) SURROUND MODE, PRESET EQ, ENTER, –I◀◀, ▶▶I +, ❚❚ PAUSE, ■, ◄ ► keys input
80	KEY0	I	Key input terminal (A/D input) (S741 to 745) LINK, REAR, FRONT, PRO LOGIC, SURROUND keys input
81	CPU VSS	—	Ground terminal
82	X0	I	System clock input terminal (4 MHz)
83	X1	O	System clock output terminal (4 MHz)
84	VCC-CPU	—	Power supply terminal (+3.3V)
85	COM	—	Not used (open)
86	LED0	O	LED drive signal output terminal (I/⏻)
87	LED1	O	LED drive signal output terminal (PRESET EQ)
88	LED2	O	LED drive signal output terminal Not used (open)
89	LED3	O	LED drive signal output terminal (SURROUND) (MG310AV only)
90	LED4	O	LED drive signal output terminal (PRO LOGIC) (MG310AV only)
91	LED5	O	LED drive signal output terminal (FRONT) (MG310AV only)

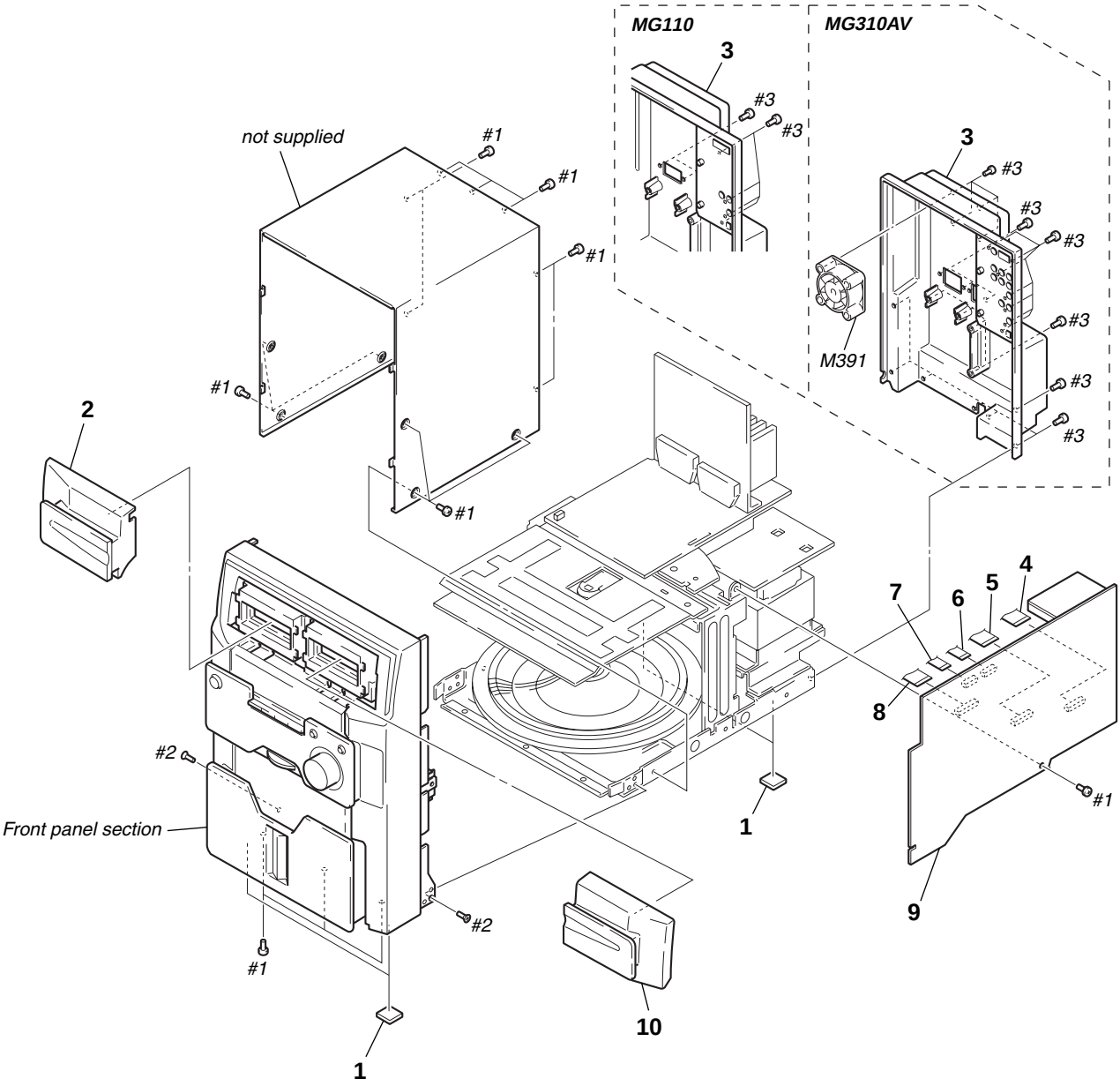
Pin No.	Pin Name	I/O	Description
92	LED6	O	LED drive signal output terminal (REAR) (MG310AV only)
93	LED7	O	LED drive signal output terminal (LINK) (MG310AV only)
94	LED8	O	LED drive signal output terminal (CD lid illumination)
95	LED9	O	LED drive signal output terminal (CD)
96, 97	LED10, LED11	O	LED drive signal output terminal Not used (open)
98 to 100	G1 to G3	O	Grid drive signal output to the fluorescent indicator tube (FL701)

SECTION 8
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AUS : Australian model CND : Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of the electrical parts list.

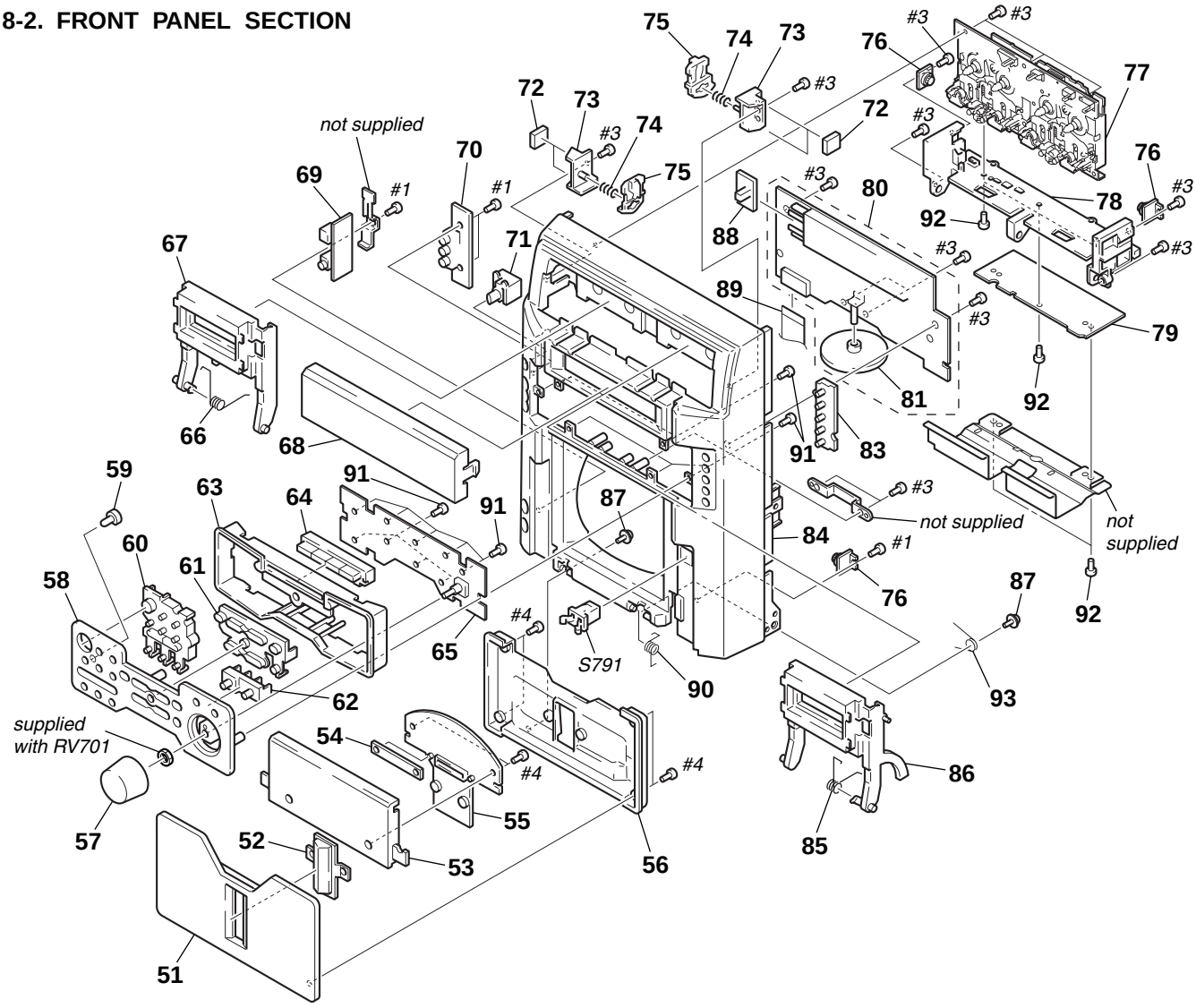
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

8-1. GENERAL SECTION



Ref. No.	Part No.	Description	Remark
1	4-232-797-01	FOOT, RUBBER	
2	A-4412-989-A	CASSETTE LID ASSY (A)	
3	4-232-779-01	PANEL, BACK (MG310AV: US, CND)	
3	4-232-779-21	PANEL, BACK (MG110)	
3	4-232-779-31	PANEL, BACK (MG310AV: AUS)	
4	1-823-005-11	WIRE (FLAT TYPE) (21CORE)	
5	1-823-000-11	WIRE (FLAT TYPE) (18CORE)	
6	1-757-997-11	WIRE (FLAT TYPE) (10CORE)	
7	1-823-001-11	WIRE (FLAT TYPE) (11CORE)	
8	1-823-004-11	WIRE (FLAT TYPE) (17CORE)	
9	A-4476-388-A	MAIN BOARD, COMPLETE (MG310AV: US, CND)	
9	A-4476-390-A	MAIN BOARD, COMPLETE (MG110)	
9	A-4726-728-A	MAIN BOARD, COMPLETE (AUS)	
10	A-4412-988-A	CASSETTE LID ASSY (B)	
M391	1-763-697-11	DC FAN (MG310AV: AUS)	

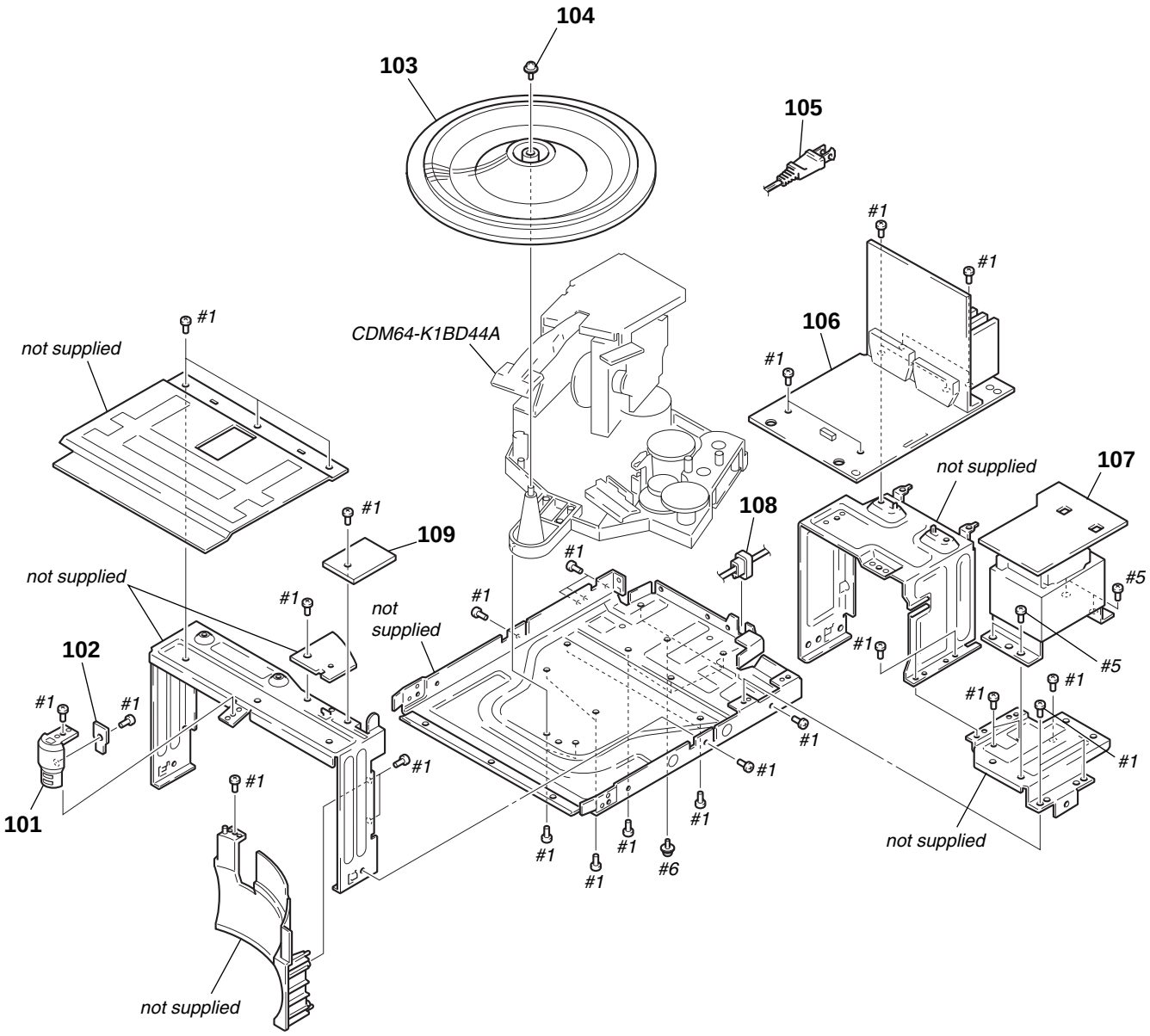
8-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-232-761-01	CD LID (MG310AV)	
51	4-232-761-21	CD LID (MG110)	
52	4-232-792-01	WINDOW (C), CD	
53	4-232-764-01	WINDOW (A), CD	
54	1-680-794-11	DOOR LED BOARD (US, CND)	
54	1-680-794-21	DOOR LED BOARD (AUS)	
55	4-232-763-01	WINDOW (B), CD	
56	4-232-762-01	HOLDER, CD LID	
57	4-232-771-01	KNOB, VOL	
58	4-232-746-01	PANEL, CONTROL (MG310AV)	
58	4-232-746-11	PANEL, CONTROL (MG110)	
59	4-232-789-01	INDICATOR (POWER)	
60	4-232-748-01	BUTTON (POWER)	
61	4-232-788-01	BUTTON (PLAY)	
62	A-4412-984-A	DSP BUTTON ASSY	
63	4-232-747-01	HOLDER, CONTROL	
64	4-232-749-01	BUTTON (FUNCTION) (MG310AV)	
64	4-232-749-11	BUTTON (FUNCTION) (MG110)	
65	A-4476-367-A	CONTROL BOARD, COMPLETE	
66	4-232-782-01	SPRING (A), CASSETTE	
67	A-4412-986-A	CASSETTE HOLDER ASSY (A)	
68	4-232-770-01	WINDOW, FL	
69	1-680-796-11	H/P BOARD (US, CND)	
69	1-680-796-21	H/P BOARD (AUS)	
70	1-680-808-11	GAME LINK BOARD	

Ref. No.	Part No.	Description	Remark
71	4-232-754-01	BUTTON, GAME	
72	3-846-312-11	SPACER (E)	
73	4-232-757-01	CATCHER, BRACKET	
74	3-029-159-02	SPRING, PUSH CATCHER RETURN	
75	3-029-158-01	CATCHER, PUSH	
76	3-049-782-21	DAMPER	
77	1-796-078-11	DECK, MECH	
78	4-232-758-01	BRACKET, MD	
79	A-4476-373-A	TC BOARD, COMPLETE	
80	A-4476-368-A	DISPLAY BOARD, COMPLETE (MG310AV)	
80	A-4476-369-A	DISPLAY BOARD, COMPLETE (MG110)	
81	4-232-753-01	DIAL, JOG	
83	A-4412-987-A	MULTI BUTTON ASSY	
84	4-232-745-01	CABINET, FRONT (MG310AV)	
84	4-232-745-11	CABINET, FRONT (MG110)	
85	4-232-783-01	SPRING (B), CASSETTE	
86	A-4412-985-A	CASSETTE HOLDER ASSY (B)	
87	4-981-789-01	BRACKET (2), YOKE	
88	1-680-809-11	RMC BOARD	
89	1-757-999-11	WIRE (FLAT TYPE) (13CORE)	
90	4-232-785-01	SPRING (B), CD	
91	4-951-620-11	SCREW (2.6X10), +BVTP	
92	4-951-620-21	SCREW (2.6), +BVTP	
93	4-232-784-01	SPRING (A), CD	
S791	1-692-960-21	SWITCH, PUSH (1 KEY) (CD LID OPEN)	

8-3. CHASSIS SECTION

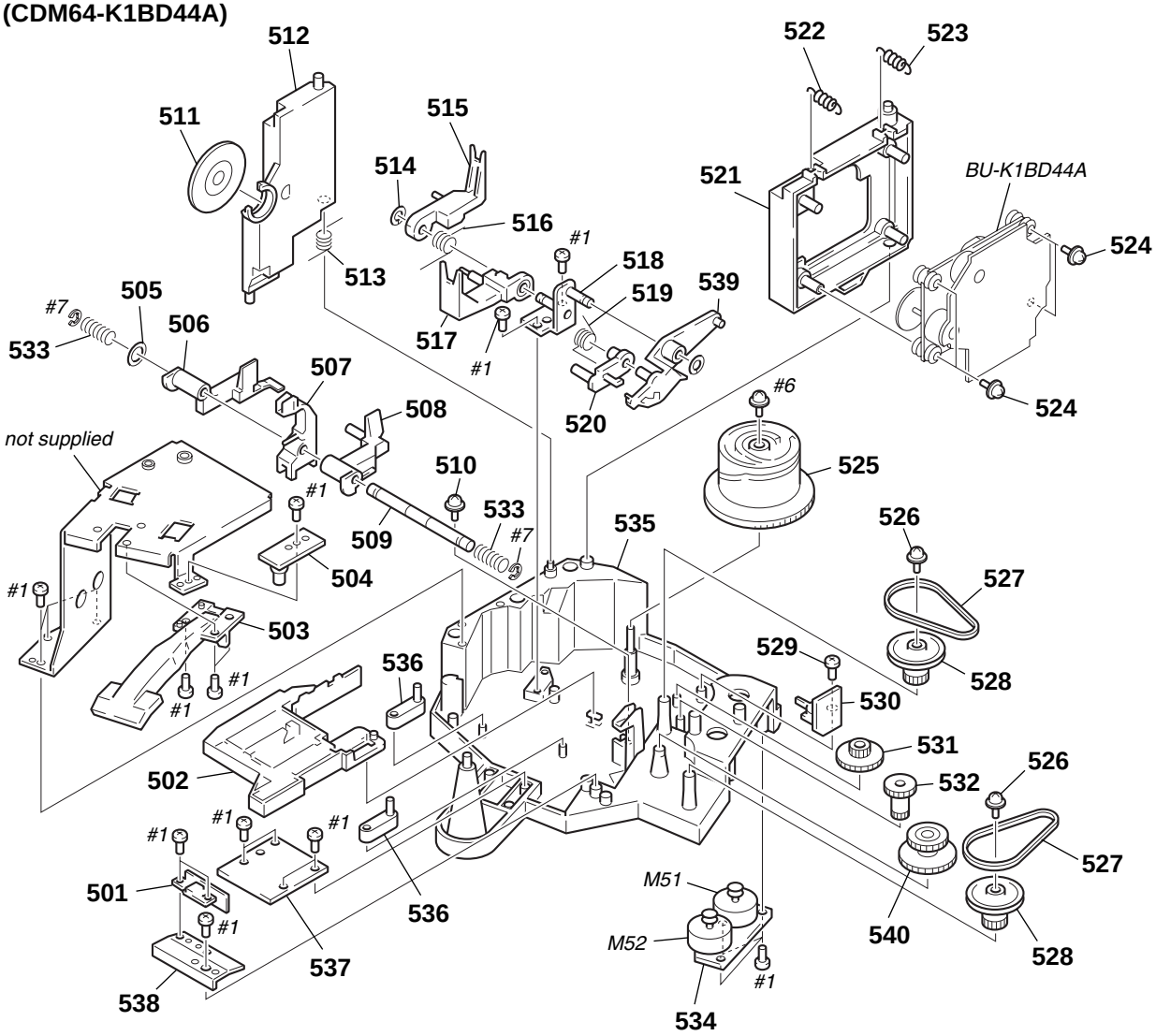


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
101	4-232-787-01	HOLDER, LED	
102	1-680-795-11	CD LED BOARD (US, CND)	
102	1-680-795-21	CD LED BOARD (AUS)	
103	4-231-311-01	TABLE (60)	
104	3-703-136-11	SCREW, TAPPING	
⚠105	1-757-933-11	CORD, POWER (US, CND)	
⚠105	1-823-003-11	CORD, POWER (AUS)	
106	A-4476-384-A	MAIN AMP BOARD, COMPLETE (MG310AV: US, CND)	

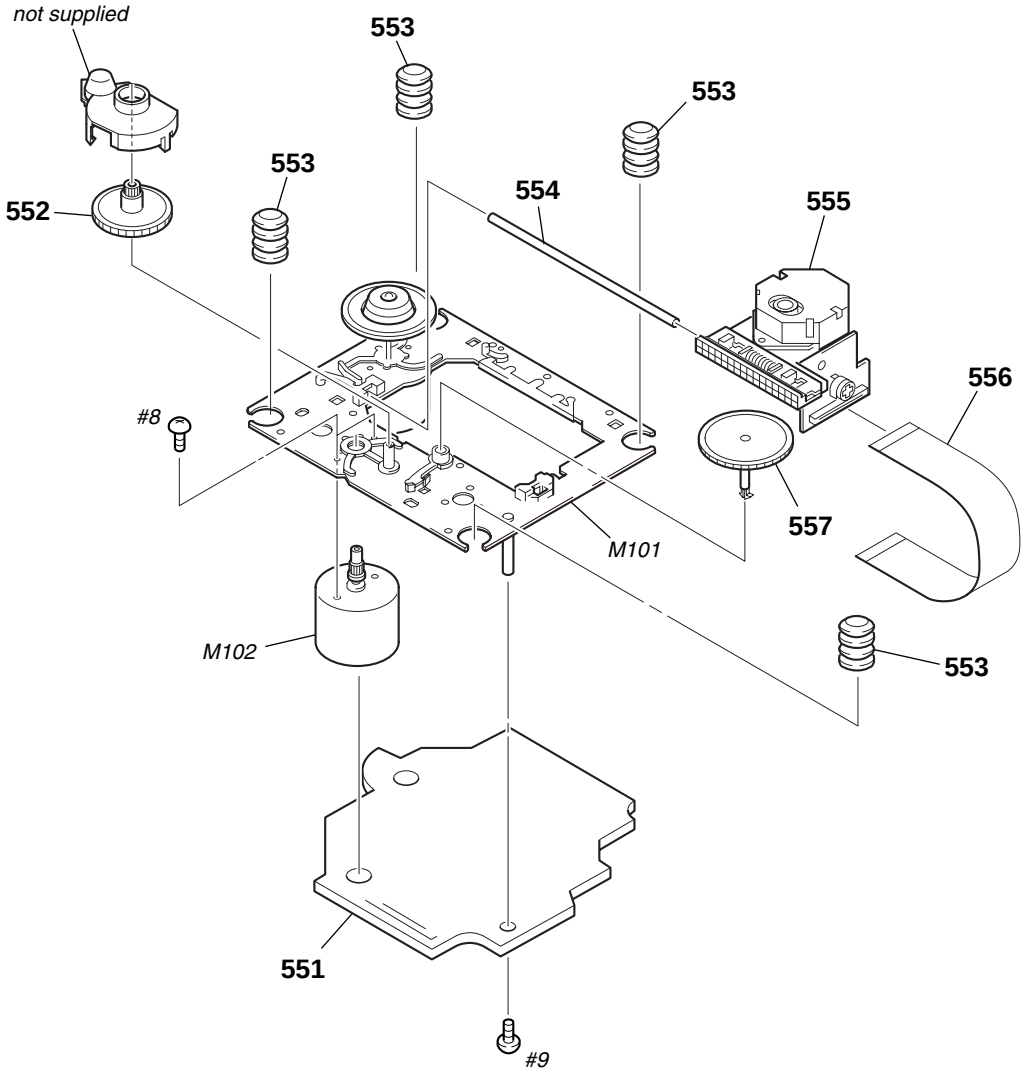
Ref. No.	Part No.	Description	Remark
106	A-4476-386-A	MAIN AMP BOARD, COMPLETE (MG110)	
106	A-4726-722-A	MAIN AMP BOARD, COMPLETE (AUS)	
107	1-680-803-21	POWER BOARD (MG310AV)	
107	1-680-803-31	POWER BOARD (MG110)	
108	3-703-244-00	BUSHING (2104), CORD	
109	1-682-126-11	FUSE BOARD (MG310AV: US, CND)	
109	1-682-126-21	FUSE BOARD (AUS)	

8-4. MECHANISM DECK SECTION (CDM64-K1BD44A)



Ref. No.	Part No.	Description	Remark
501	1-680-799-11	D SENSOR (IN) BOARD (US, CND)	
501	1-680-799-21	D SENSOR (IN) BOARD (AUS)	
502	4-231-310-01	SLIDER (60)	
503	4-216-088-02	GUIDE (DISC)	
504	1-680-800-11	D SENSOR (OUT) BOARD (US, CND)	
504	1-680-800-21	D SENSOR (OUT) BOARD (AUS)	
505	3-701-441-21	WASHER	
506	X-4950-885-2	HOLDER (DISC L) ASSY	
507	4-231-313-01	LEVER (LOCK 60)	
508	X-4950-886-3	HOLDER (DISC R) ASSY	
509	4-216-066-02	SHAFT (CLAMP)	
510	4-998-716-01	SCREW, BU FITTING	
511	A-4672-768-A	MAGNET ASSY	
512	4-216-082-01	HOLDER (MAGNET), TORSION	
513	4-216-081-01	SPRING (MG), TORSION	
514	3-325-697-01	WASHER	
515	4-216-076-01	HOLDER (R)	
516	4-216-077-01	SPRING (HOLDER FR), TORSION	
517	4-225-871-01	HOLDER (F400)	
518	X-4950-900-1	BRACKET (LEVER) ASSY	
519	4-216-080-01	SPRING (LIMITER), TORSION	
520	4-216-079-02	LIMITER (LEVER)	
521	X-4950-901-5	HOLDER ASSY, BU	
522	4-216-085-01	SPRING (F-1), TENSION	
523	4-216-086-01	SPRING (F-2), TENSION	
524	4-957-577-21	SCREW PTP WH (2.6X8) (DIA. 10)	
525	A-4672-676-B	CAM ASSY	
526	3-703-136-11	SCREW, TAPPING	
527	4-231-326-01	BELT (60)	
528	4-231-316-01	PULLEY (60)	
529	4-951-620-01	SCREW (2.6X8), +BVTP	
530	1-680-798-11	LOAD SW BOARD (US, CND)	
530	1-680-798-21	LOAD SW BOARD (AUS)	
531	4-216-057-01	GEAR (CENTER 2)	
532	4-231-315-01	GEAR (CENTER 60)	
533	4-216-067-01	SPRING (CLAMP), COMPRESSION	
534	1-680-797-11	L.T MOTOR BOARD (US, CND)	
534	1-680-797-21	L.T MOTOR BOARD (AUS)	
535	4-231-312-01	BASE (CDM 60)	
536	4-216-062-01	LEVER (FULCRUM)	
537	1-680-817-11	T SENSOR BOARD (US, CND)	
537	1-680-817-21	T SENSOR BOARD (AUS)	
538	4-231-309-01	BRACKET (D-SENSOR)	
539	4-216-078-01	LEVER (LOADING)	
540	4-231-314-01	GEAR (TABLE 60)	
M51	A-4735-051-A	MOTOR (60) ASSY (LOADING)	
M52	A-4735-051-A	MOTOR (60) ASSY (TABLE)	

8-5. BASE UNIT SECTION (BU-K1BD44A)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
551	A-4725-696-A	CD BOARD, COMPLETE	
552	2-627-003-02	GEAR (B) (RP)	
553	4-992-054-11	RUBBER, VIBRATION PROOF	
554	2-626-908-01	SHAFT, SLED	
⚠555	A-3328-818-A	BASE ASSY (KSM-213BFN), OP	
556	1-757-055-11	WIRE, PARALLEL (FFC) (16 CORE)	
557	2-626-907-01	GEAR (A) (S)	
M101	X-2646-110-1	T.T CHASSIS ASSY (MG) (F) (SPINDLE)	
M102	X-2625-769-1	MOTOR GEAR ASSY (MB) (RP) (SLED)	

SECTION 9
ELECTRICAL PARTS LIST

CD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AUS : Australian model
  CND : Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4725-696-A	CD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C104	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C111	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C112	1-115-156-11	CERAMIC CHIP	1uF		10V
C114	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C116	1-126-382-11	ELECT	100uF	20%	16V
C117	1-126-382-11	ELECT	100uF	20%	16V
C118	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C122	1-104-665-11	ELECT	100uF	20%	16V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C125	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C126	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-126-382-11	ELECT	100uF	20%	16V
C130	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C131	1-104-665-11	ELECT	100uF	20%	16V
C133	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C140	1-115-156-11	CERAMIC CHIP	1uF		10V
C143	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C145	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C146	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C150	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C159	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C162	1-126-382-11	ELECT	100uF	20%	16V
C163	1-104-665-11	ELECT	100uF	20%	16V
C165	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C167	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C168	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C171	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C172	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C181	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C182	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C183	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C184	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C185	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C190	1-115-156-11	CERAMIC CHIP	1uF		10V
C191	1-104-665-11	ELECT	100uF	20%	16V
C192	1-126-382-11	ELECT	100uF	20%	16V
C193	1-126-382-11	ELECT	100uF	20%	16V
C194	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C196	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C197	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C198	1-104-665-11	ELECT	100uF	20%	16V
C199	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
		< CONNECTOR >			
CN101	1-568-864-11	CONNECTOR, FFC 21P			
CN102	1-779-466-11	CONNECTOR, FFC (LIF (NON-ZIF))16P			
		< DIODE >			
D101	8-719-422-12	DIODE UDZ-TE-17-3.9B			
		< FERRITE BEAD >			
FB101	1-469-144-21	FERRITE	0uH		
FB103	1-469-144-21	FERRITE	0uH		
		< IC >			
IC101	8-752-402-31	IC CXD3017Q			
IC102	8-759-549-28	IC BA5974FP-E2			
IC103	8-752-089-74	IC CXA2581N-T4			
		< SHORT >			
JR101	1-216-864-11	SHORT	0		
		< TRANSISTOR >			
Q101	8-729-049-31	TRANSISTOR	2SB710A-RTX		
Q102	8-729-920-85	TRANSISTOR	2SD1664-T100-QR		
		< RESISTOR >			
R101	1-216-821-11	METAL CHIP	1K	5%	1/16W
R102	1-216-845-11	METAL CHIP	100K	5%	1/16W
R103	1-216-835-11	METAL CHIP	15K	5%	1/16W
R104	1-216-839-11	METAL CHIP	33K	5%	1/16W
R106	1-216-821-11	METAL CHIP	1K	5%	1/16W

CD | CD LED | CONTROL

Ref. No.	Part No.	Description			Remark
R107	1-216-833-11	METAL CHIP	10K	5%	1/16W
R108	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R109	1-216-857-11	METAL CHIP	1M	5%	1/16W
R111	1-216-846-11	METAL CHIP	120K	5%	1/16W
R114	1-218-745-11	RES-CHIP	160K	5%	1/16W
R116	1-216-797-11	METAL CHIP	10	5%	1/16W
R117	1-216-821-11	METAL CHIP	1K	5%	1/16W
R118	1-216-809-11	METAL CHIP	100	5%	1/16W
R119	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R120	1-216-835-11	METAL CHIP	15K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-833-11	METAL CHIP	10K	5%	1/16W
R124	1-216-845-11	METAL CHIP	100K	5%	1/16W
R131	1-216-813-11	METAL CHIP	220	5%	1/16W
R143	1-216-836-11	METAL CHIP	18K	5%	1/16W
R144	1-216-836-11	METAL CHIP	18K	5%	1/16W
R147	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R148	1-216-797-11	METAL CHIP	10	5%	1/16W
R149	1-216-797-11	METAL CHIP	10	5%	1/16W
R150	1-216-833-11	METAL CHIP	10K	5%	1/16W
R151	1-216-845-11	METAL CHIP	100K	5%	1/16W
R158	1-216-837-11	METAL CHIP	22K	5%	1/16W
R159	1-216-837-11	METAL CHIP	22K	5%	1/16W
R162	1-216-847-11	METAL CHIP	150K	5%	1/16W
R171	1-216-837-11	METAL CHIP	22K	5%	1/16W
R172	1-216-837-11	METAL CHIP	22K	5%	1/16W
R173	1-216-837-11	METAL CHIP	22K	5%	1/16W
R181	1-216-837-11	METAL CHIP	22K	5%	1/16W
R182	1-216-837-11	METAL CHIP	22K	5%	1/16W
R183	1-216-837-11	METAL CHIP	22K	5%	1/16W
R190	1-216-813-11	METAL CHIP	220	5%	1/16W
R191	1-216-839-11	METAL CHIP	33K	5%	1/16W
R192	1-216-839-11	METAL CHIP	33K	5%	1/16W
R193	1-216-846-11	METAL CHIP	120K	5%	1/16W
R194	1-216-845-11	METAL CHIP	100K	5%	1/16W
R195	1-216-853-11	METAL CHIP	470K	5%	1/16W
R196	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R197	1-216-821-11	METAL CHIP	1K	5%	1/16W
RN101	1-233-576-11	RES, CHIP NETWORK 100			
		< SWITCH >			
S101	1-786-164-11	SWITCH, DETECTION (LIMIT)			
		< VIBRATOR >			
X101	1-767-226-11	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
	1-680-795-11	CD LED BOARD (US, CND)			
	1-680-795-21	CD LED BOARD (AUS)			
		**********			
		< CONNECTOR >			
CN803	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
		< LED >			
D781	8-719-058-64	LED SEL5823A-TP15 (DISC ILLUMINATION)			
D782	8-719-058-03	LED SEL5423E-TP15 (DISC ILLUMINATION)			

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R781	1-216-805-11	METAL CHIP	47	5%	1/16W
**********					
	A-4476-367-A	CONTROL BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
CN708	1-784-734-11	CONNECTOR, FFC 12P			
		< LED >			
D708	8-719-052-06	LED SLR-342MGT32 (PRESET EQ)			
D736	8-719-060-44	LED SLR-342VRT32 (I/⏻)			
		< TRANSISTOR >			
Q718	8-729-038-67	TRANSISTOR	KRC102S		
		< RESISTOR >			
R725	1-216-813-11	METAL CHIP	220	5%	1/16W
R736	1-216-821-11	METAL CHIP	1K	5%	1/16W
R750	1-216-839-11	METAL CHIP	33K	5%	1/16W
R751	1-216-833-11	METAL CHIP	10K	5%	1/16W
R752	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R753	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R754	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R755	1-216-821-11	METAL CHIP	1K	5%	1/16W
R756	1-216-819-11	METAL CHIP	680	5%	1/16W
R760	1-216-839-11	METAL CHIP	33K	5%	1/16W
R761	1-216-833-11	METAL CHIP	10K	5%	1/16W
R762	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R763	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R764	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R765	1-216-821-11	METAL CHIP	1K	5%	1/16W
R766	1-216-819-11	METAL CHIP	680	5%	1/16W
R771	1-216-833-11	METAL CHIP	10K	5%	1/16W
R772	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R773	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R774	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R775	1-216-821-11	METAL CHIP	1K	5%	1/16W
R776	1-216-819-11	METAL CHIP	680	5%	1/16W
		< ROTARY ENCODER >			
RV701	1-473-392-11	ENCODER, ROTARY (VOLUME)			
		< SWITCH >			
S700	1-762-196-21	SWITCH, TACT (I/⏻)			
S750	1-762-196-21	SWITCH, TACT (SURROUND MODE)			
S751	1-762-196-21	SWITCH, TACT (PRESET EQ)			
S752	1-762-196-21	SWITCH, TACT (ENTER)			
S753	1-762-196-21	SWITCH, TACT (– ⏮)			
S754	1-762-196-21	SWITCH, TACT (⏭ +)			
S755	1-762-196-21	SWITCH, TACT(⏸ PAUSE)			
S756	1-762-196-21	SWITCH, TACT (■)			
S757	1-762-196-21	SWITCH, TACT (◄ ►)			
S760	1-762-196-21	SWITCH, TACT (TIMER SELECT)			
S761	1-762-196-21	SWITCH, TACT (TIMER SET)			

CONTROL | D SENSOR (IN) | D SENSOR (OUT) | DISPLAY

Ref. No.	Part No.	Description			Remark
S762	1-762-196-21	SWITCH, TACT (◀◀)			
S763	1-762-196-21	SWITCH, TACT (▶▶)			
S764	1-762-196-21	SWITCH, TACT (TUNER/BAND)			
S765	1-762-196-21	SWITCH, TACT (CD)			
S766	1-762-196-21	SWITCH, TACT (TAPE A/B)			
S767	1-762-196-21	SWITCH, TACT (5.1CH/VIDEO (MD))			
S770	1-762-196-21	SWITCH, TACT (DISPLAY)			
S771	1-762-196-21	SWITCH, TACT (PLAY MODE)			
S772	1-762-196-21	SWITCH, TACT (REPEAT STEREO/MONO)			
S773	1-762-196-21	SWITCH, TACT (CD SYNCRO)			
S774	1-762-196-21	SWITCH, TACT (● REC)			
S775	1-762-196-21	SWITCH, TACT (CLEAR)			
S776	1-762-196-21	SWITCH, TACT (DIRECTION)			
S777	1-762-196-21	SWITCH, TACT (MENU)			
**********					
	1-680-799-11	D SENSOR (IN) BOARD (US, CND)			
	1-680-799-21	D SENSOR (IN) BOARD (AUS)			
		**********			
*	4-976-474-01	HOLDER (P-T)			
		< PHOTO TRANSISTOR >			
Q841	8-729-921-53	PHOTO TRANSISTOR PT483F1			
**********					
	1-680-800-11	D SENSOR (OUT) BOARD (US, CND)			
	1-680-800-21	D SENSOR (OUT) BOARD (AUS)			
		**********			
*	4-976-473-01	HOLDER (LED-S)			
		< LED >			
D841	8-719-055-84	LED GL528VS1 (DISC IN DETECT SENSOR)			
		< RESISTOR >			
R841	1-216-819-11	METAL CHIP	680	5%	1/16W
**********					
	A-4476-368-A	DISPLAY BOARD, COMPLETE (MG310AV)			
	A-4476-369-A	DISPLAY BOARD, COMPLETE (MG110)			
		**********			
	4-232-752-01	HOLDER, FL			
	4-232-753-01	DIAL, JOG			
		< CAPACITOR >			
C701	1-104-665-11	ELECT	100uF	20%	10V
C702	1-104-665-11	ELECT	100uF	20%	10V
C703	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C704	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C706	1-126-963-11	ELECT	4.7uF	20%	50V
C708	1-104-665-11	ELECT	100uF	20%	10V
C710	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C711	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C712	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C713	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C714	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C715	1-126-960-11	ELECT	1uF	20%	50V
C717	1-126-960-11	ELECT	1uF	20%	50V
C740	1-126-964-11	ELECT	10uF	20%	50V
C741	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C742	1-126-964-11	ELECT	10uF	20%	50V
C743	1-126-964-11	ELECT	10uF	20%	50V
C744	1-104-665-11	ELECT	100uF	20%	10V
C745	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN701	1-784-739-11	CONNECTOR, FFC 17P			
CN704	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN705	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN707	1-784-734-11	CONNECTOR, FFC 12P			
		< DIODE >			
D701	8-719-063-79	DIODE 1N4002B			
D702	8-719-063-79	DIODE 1N4002B			
D703	8-719-052-06	LED SLR-342MGT32 (LINK) (MG310AV)			
D704	8-719-052-06	LED SLR-342MGT32 (REAR) (MG310AV)			
D705	8-719-052-06	LED SLR-342MGT32 (FRONT) (MG310AV)			
D706	8-719-052-06	LED SLR-342MGT32 (PRO LPGIC) (MG310AV)			
D707	8-719-052-06	LED SLR-342MGT32 (SURROUND) (MG310AV)			
D710	8-719-991-33	DIODE 1SS133T-77			
		< FLUORESCENT INDICATOR TUBE >			
FL701	1-518-748-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC701	8-759-831-49	IC MB90M407APF-G-104-BND			
IC703	8-759-495-25	IC BA3833FP-E2			
		< SHORT >			
JR701	1-216-864-11	SHORT	0		
JR702	1-216-864-11	SHORT	0		
JR703	1-216-864-11	SHORT	0		
JR704	1-216-864-11	SHORT	0		
JR705	1-216-864-11	SHORT	0		
JR706	1-216-864-11	SHORT	0		
JR707	1-216-864-11	SHORT	0		
		< TRANSISTOR >			
Q702	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q703	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q704	8-729-038-67	TRANSISTOR	KRC102S		
Q705	8-729-038-67	TRANSISTOR	KRC102S		
Q713	8-729-038-67	TRANSISTOR	KRC102S (MG310AV)		
Q714	8-729-038-67	TRANSISTOR	KRC102S (MG310AV)		
Q715	8-729-038-67	TRANSISTOR	KRC102S (MG310AV)		
Q716	8-729-038-67	TRANSISTOR	KRC102S (MG310AV)		
Q717	8-729-038-67	TRANSISTOR	KRC102S (MG310AV)		
Q721	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q722	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q723	8-729-036-89	TRANSISTOR	KTC3198GR-A		
		< RESISTOR >			
R701	1-216-821-11	METAL CHIP	1K	5%	1/16W
R702	1-216-821-11	METAL CHIP	1K	5%	1/16W

DISPLAY | DOOR LED | FUSE | GAME LINK

Ref. No.	Part No.	Description			Remark
R703	1-216-821-11	METAL CHIP	1K	5%	1/16W
R704	1-216-821-11	METAL CHIP	1K	5%	1/16W
R705	1-216-845-11	METAL CHIP	100K	5%	1/16W
R706	1-216-809-11	METAL CHIP	100	5%	1/16W
R707	1-216-821-11	METAL CHIP	1K	5%	1/16W
R708	1-216-849-11	METAL CHIP	220K	5%	1/16W
R709	1-216-845-11	METAL CHIP	100K	5%	1/16W
R710	1-216-845-11	METAL CHIP	100K	5%	1/16W
R711	1-216-845-11	METAL CHIP	100K	5%	1/16W
R712	1-216-845-11	METAL CHIP	100K	5%	1/16W
R713	1-216-833-11	METAL CHIP	10K	5%	1/16W
R714	1-216-819-11	METAL CHIP	680	5%	1/16W (MG310AV)
R715	1-216-813-11	METAL CHIP	220	5%	1/16W (MG310AV)
R716	1-216-805-11	METAL CHIP	47	5%	1/16W
R717	1-216-813-11	METAL CHIP	220	5%	1/16W (MG310AV)
R718	1-216-845-11	METAL CHIP	100K	5%	1/16W
R719	1-216-845-11	METAL CHIP	100K	5%	1/16W
R720	1-216-833-11	METAL CHIP	10K	5%	1/16W
R721	1-216-813-11	METAL CHIP	220	5%	1/16W (MG310AV)
R722	1-216-813-11	METAL CHIP	220	5%	1/16W (MG310AV)
R723	1-216-833-11	METAL CHIP	10K	5%	1/16W
R724	1-216-845-11	METAL CHIP	100K	5%	1/16W
R727	1-216-813-11	METAL CHIP	220	5%	1/16W (MG310AV)
R728	1-216-845-11	METAL CHIP	100K	5%	1/16W
R729	1-216-845-11	METAL CHIP	100K	5%	1/16W
R730	1-216-845-11	METAL CHIP	100K	5%	1/16W
R731	1-216-845-11	METAL CHIP	100K	5%	1/16W
R732	1-216-841-11	METAL CHIP	47K	5%	1/16W
R733	1-216-841-11	METAL CHIP	47K	5%	1/16W
R734	1-216-841-11	METAL CHIP	47K	5%	1/16W
R735	1-216-845-11	METAL CHIP	100K	5%	1/16W
R737	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R738	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R739	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R740	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R742	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (MG310AV)
R743	1-216-827-11	METAL CHIP	3.3K	5%	1/16W (MG310AV)
R744	1-216-823-11	METAL CHIP	1.5K	5%	1/16W (MG310AV)
R745	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
R746	1-216-833-11	METAL CHIP	10K	5%	1/16W
R747	1-216-845-11	METAL CHIP	100K	5%	1/16W
R748	1-216-833-11	METAL CHIP	10K	5%	1/16W
R749	1-216-845-11	METAL CHIP	100K	5%	1/16W
R757	1-216-833-11	METAL CHIP	10K	5%	1/16W
R758	1-216-833-11	METAL CHIP	10K	5%	1/16W
R782	1-216-845-11	METAL CHIP	100K	5%	1/16W
R783	1-216-845-11	METAL CHIP	100K	5%	1/16W
R784	1-216-845-11	METAL CHIP	100K	5%	1/16W
R785	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description	Remark
		< ROTARY ENCODER >	
RV702	1-476-597-11	ENCODER (ROTARY TYPE) (DISC ACCESS)	
		< SWITCH >	
S741	1-762-196-21	SWITCH, TACT (LINK) (MG310AV)	
S742	1-762-196-21	SWITCH, TACT (REAR) (MG310AV)	
S743	1-762-196-21	SWITCH, TACT (FRONT) (MG310AV)	
S744	1-762-196-21	SWITCH, TACT (PRO LPGIC) (MG310AV)	
S745	1-762-196-21	SWITCH, TACT (SURROUND) (MG310AV)	
		< VIBRATOR >	
X701	1-577-082-11	VIBRATOR, CERAMIC (4MHz)	
**********			
	1-680-794-11	DOOR LED BOARD (US, CND)	
	1-680-794-21	DOOR LED BOARD (AUS)	
		**********	
		< LED >	
D791	8-719-072-76	LED SEL5E23C-TP15	(CD LID ILLUMINATION)
		< RESISTOR >	
R791	1-216-799-11	METAL CHIP 15 5% 1/16W	
**********			
	1-682-126-11	FUSE BOARD (MG310AV: US, CND)	
	1-682-126-21	FUSE BOARD (AUS)	
		**********	
	1-533-233-31	HOLDER, FUSE	
		< CONNECTOR >	
CN901	1-564-521-11	PLUG, CONNECTOR 6P	
		< FUSE >	
⚠F905	1-533-453-11	FUSE, GLASS TUBE (DIA. 5) (5A/125V)	(US, CND)
⚠F905	1-533-470-11	FUSE, GLASS TUBE (DIA. 5) (3.15A/250V)	(AUS)
⚠F906	1-533-453-11	FUSE, GLASS TUBE (DIA. 5) (5A/125V)	(US, CND)
⚠F906	1-533-470-11	FUSE, GLASS TUBE (DIA. 5) (3.15A/250V)	(AUS)
**********			
	1-680-808-11	GAME LINK BOARD	
		**********	
		< CAPACITOR >	
C705	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
		< JACK >	
J701	1-815-646-11	JACK, PIN 3P (VIDEO, AUDIO)	
		< SWITCH >	
S701	1-762-196-21	SWITCH, TACT (GAME)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

H/P **L.T MOTOR** **LOAD SW** **MAIN**

Ref. No.	Part No.	Description			Remark
	1-680-796-11	H/P BOARD (US, CND)			
	1-680-796-21	H/P BOARD (AUS)			
		**********			
		< JACK >			
J503	1-815-629-11	JACK (SMALL TYPE) (DIA.3.5) (PHONE)			
J801	1-815-575-11	CONNECTOR, DIN 6P (KEYBOARD)			
		< COIL >			
L801	1-410-517-11	INDUCTOR	47uH		
**********					
	1-680-797-11	L.T MOTOR BOARD (US, CND)			
	1-680-797-21	L.T MOTOR BOARD (AUS)			
		**********			
**********					
	1-680-798-11	LOAD SW BOARD (US, CND)			
	1-680-798-21	LOAD SW BOARD (AUS)			
		**********			
		< SWITCH >			
S842	1-786-154-11	SWITCH, LEVER SLIDE (LOAD)			
**********					
	A-4476-388-A	MAIN BOARD, COMPLETE			(MG310AV: US, CND)
	A-4476-390-A	MAIN BOARD, COMPLETE (MG110)			
	A-4726-728-A	MAIN BOARD, COMPLETE (AUS)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C100	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C101	1-126-960-11	ELECT	1uF	20%	50V
C102	1-126-960-11	ELECT	1uF	20%	50V
C103	1-126-960-11	ELECT	1uF	20%	50V
C104	1-126-960-11	ELECT	1uF	20%	50V
C105	1-126-960-11	ELECT	1uF	20%	50V
C106	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C107	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C108	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C110	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C111	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C112	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C113	1-126-963-11	ELECT	4.7uF	20%	50V
C114	1-126-963-11	ELECT	4.7uF	20%	50V (MG310AV)
C115	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C116	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C117	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C118	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C119	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C120	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C121	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C122	1-126-963-11	ELECT	4.7uF	20%	50V
C123	1-126-963-11	ELECT	4.7uF	20%	50V
C124	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V (US, CND)
C124	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (AUS)
C130	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C131	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C141	1-136-164-00	FILM	0.082uF	5%	50V
C142	1-136-164-00	FILM	0.082uF	5%	50V
C143	1-126-964-11	ELECT	10uF	20%	50V
C144	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C145	1-126-961-11	ELECT	2.2uF	20%	50V
C150	1-126-963-11	ELECT	4.7uF	20%	50V (MG110)
C172	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C176	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (MG310AV)
C200	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C201	1-126-960-11	ELECT	1uF	20%	50V
C202	1-126-960-11	ELECT	1uF	20%	50V
C203	1-126-960-11	ELECT	1uF	20%	50V
C204	1-126-960-11	ELECT	1uF	20%	50V
C205	1-126-960-11	ELECT	1uF	20%	50V
C206	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C207	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C208	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C210	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C211	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C212	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C213	1-126-963-11	ELECT	4.7uF	20%	50V
C214	1-126-963-11	ELECT	4.7uF	20%	50V (MG310AV)
C215	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C216	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C217	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C218	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C219	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C220	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C221	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C222	1-126-963-11	ELECT	4.7uF	20%	50V
C223	1-126-963-11	ELECT	4.7uF	20%	50V
C224	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V (US, CND)
C224	1-162-970-11	CERMIC CHIP	0.01uF	10%	25V (AUS)

MAIN

Ref. No.	Part No.	Description			Remark
C230	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C231	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C233	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (MG310AV)
C234	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C240	1-126-933-11	ELECT	100uF	20%	16V
C241	1-136-164-00	FILM	0.082uF	5%	50V
C242	1-136-164-00	FILM	0.082uF	5%	50V
C243	1-126-964-11	ELECT	10uF	20%	50V
C244	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C245	1-126-961-11	ELECT	2.2uF	20%	50V
C250	1-126-963-11	ELECT	4.7uF	20%	50V (MG110)
C301	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C304	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C305	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C306	1-126-964-11	ELECT	10uF	20%	50V (MG310AV)
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C308	1-126-935-11	ELECT	470uF	20%	16V (MG310AV)
C309	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C310	1-126-960-11	ELECT	1uF	20%	50V (MG310AV)
C311	1-130-479-00	MYLAR	0.0047uF	5%	50V (MG310AV)
C312	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V (MG310AV)
C313	1-136-165-00	FILM	0.1uF	5%	50V (MG310AV)
C314	1-136-169-00	FILM	0.22uF	5%	50V (MG310AV)
C315	1-136-169-00	FILM	0.22uF	5%	50V (MG310AV)
C316	1-136-165-00	FILM	0.1uF	5%	50V (MG310AV)
C317	1-130-479-00	MYLAR	0.0047uF	5%	50V (MG310AV)
C318	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V (MG310AV)
C319	1-126-960-11	ELECT	1uF	20%	50V (MG310AV)
C320	1-130-480-00	MYLAR	0.0056uF	5%	50V (MG310AV)
C321	1-136-161-00	FILM	0.047uF	5%	50V (MG310AV)
C322	1-136-175-00	FILM	0.68uF	5%	50V (MG310AV)
C323	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V (MG310AV)
C324	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V (MG310AV)
C325	1-126-963-11	ELECT	4.7uF	20%	50V (MG310AV)
C326	1-126-963-11	ELECT	4.7uF	20%	50V (MG310AV)
C327	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V (MG310AV)
C328	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V (MG310AV)
C329	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C330	1-136-161-00	FILM	0.047uF	5%	50V (MG310AV)
C331	1-136-161-00	FILM	0.047uF	5%	50V (MG310AV)
C332	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C334	1-136-157-00	FILM	0.022uF	5%	50V (MG310AV)
C335	1-136-157-00	FILM	0.022uF	5%	50V (MG310AV)
C336	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MG310AV)
C337	1-115-412-11	CERAMIC CHIP	680PF	5%	25V (MG310AV)
C338	1-136-153-00	FILM	0.01uF	5%	50V (MG310AV)
C339	1-115-412-11	CERAMIC CHIP	680PF	5%	25V (MG310AV)
C340	1-136-153-00	FILM	0.01uF	5%	50V (MG310AV)
C341	1-136-153-00	FILM	0.01uF	5%	50V (MG310AV)
C342	1-136-153-00	FILM	0.01uF	5%	50V (MG310AV)
C343	1-126-947-11	ELECT	47uF	20%	10V (MG310AV)
C344	1-130-481-00	MYLAR	0.0068uF	5%	50V (MG310AV)
C345	1-126-963-11	ELECT	4.7uF	20%	50V (MG310AV)
C346	1-126-935-11	ELECT	470uF	20%	16V (MG310AV)
C347	1-126-934-11	ELECT	220uF	20%	10V (MG310AV)
C348	1-126-934-11	ELECT	220uF	20%	10V
C349	1-104-665-11	ELECT	100uF	20%	10V (MG310AV)
C350	1-126-947-11	ELECT	47uF	20%	16V
C351	1-104-665-11	ELECT	100uF	20%	10V (MG310AV)
C352	1-104-665-11	ELECT	100uF	20%	10V (MG310AV)
C353	1-126-933-11	ELECT	100uF	20%	16V (MG310AV)
C356	1-104-665-11	ELECT	100uF	20%	10V (MG310AV)
C358	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C360	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C361	1-126-934-11	ELECT	220uF	20%	10V
C362	1-126-964-11	ELECT	10uF	20%	50V
C363	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C364	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (MG110)
C365	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (MG110)
C366	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (MG110)
C367	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (MG110)
C368	1-126-964-11	ELECT	10uF	20%	50V
C369	1-126-964-11	ELECT	10uF	20%	50V (MG110)
C370	1-126-964-11	ELECT	10uF	20%	50V
C371	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C372	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C373	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (MG310AV)
C374	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (MG310AV)
C375	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C376	1-126-960-11	ELECT	1uF	20%	50V (MG310AV)
C377	1-126-960-11	ELECT	1uF	20%	50V (MG310AV)
C378	1-126-960-11	ELECT	1uF	20%	50V (MG310AV)
C379	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C380	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C391	1-126-963-11	ELECT	4.7uF	20%	50V (AUS)
C397	1-126-959-11	ELECT	0.47uF	20%	50V
C399	1-126-933-11	ELECT	100uF	20%	16V
C801	1-115-456-21	DOUBLE LAYER	0.22F		5.5V
C802	1-126-961-11	ELECT	2.2uF	20%	50V
C803	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C804	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C805	1-104-665-11	ELECT	100uF	20%	10V
C806	1-104-665-11	ELECT	100uF	20%	10V
C807	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C808	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C809	1-104-665-11	ELECT	100uF	20%	10V
C810	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C811	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C812	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C813	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C814	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C870	1-104-665-11	ELECT	100uF	20%	10V
C881	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C882	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C900	1-126-926-11	ELECT	1000uF	20%	10V
C961	1-161-055-00	CERAMIC	0.022uF	10%	50V
C962	1-161-055-00	CERAMIC	0.022uF	10%	50V
C963	1-161-055-00	CERAMIC	0.022uF	10%	50V
C964	1-161-055-00	CERAMIC	0.022uF	10%	50V
C965	1-126-943-11	ELECT	2200uF	20%	25V
C966	1-126-934-11	ELECT	220uF	20%	16V
C967	1-126-934-11	ELECT	220uF	20%	16V
C968	1-126-935-11	ELECT	470uF	20%	16V
C969	1-126-934-11	ELECT	220uF	20%	16V
C971	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C972	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C973	1-126-967-11	ELECT	47uF	20%	50V
C974	1-126-964-11	ELECT	10uF	20%	50V

< CONNECTOR >

Ref. No.	Part No.	Description
CN301	1-784-778-11	CONNECTOR, FFC 17P
CN303	1-568-838-11	CONNECTOR, FFC 21P
* CN304	1-564-711-11	PIN, CONNECTOR (SMALL TYPE) 9P
* CN305	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P
CN309	1-691-050-21	CONNECTOR, FFC 18P
* CN310	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
CN311	1-695-371-31	CONNECTOR, FFC 10P
CN312	1-568-830-11	CONNECTOR, FFC 11P
CN313	1-564-506-11	PLUG, CONNECTOR 3P (AUS)
* CN315	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
CN317	1-564-505-11	PLUG, CONNECTOR 2P
* CN903	1-564-512-11	PLUG, CONNECTOR 9P

< DIODE >

Ref. No.	Part No.	Description
D350	8-719-921-63	DIODE MTZJ-T-77-7.5B
D389	8-719-991-33	DIODE 1SS133T-77
D395	8-719-991-33	DIODE 1SS133T-77
D399	8-719-991-33	DIODE 1SS133T-77
D802	8-719-063-79	DIODE 1N4002B
D803	8-719-063-79	DIODE 1N4002B
D804	8-719-991-33	DIODE 1SS133T-77
D805	8-719-991-33	DIODE 1SS133T-77
D806	8-719-991-33	DIODE 1SS133T-77
D807	8-719-050-84	DIODE RB441QT-40T-77
D865	8-719-109-97	DIODE MTZJ-T-77-6.8C
D866	8-719-063-79	DIODE 1N4002B
D961	8-719-063-79	DIODE 1N4002B
D962	8-719-063-79	DIODE 1N4002B
D963	8-719-063-79	DIODE 1N4002B
D964	8-719-063-79	DIODE 1N4002B
D971	8-719-109-89	DIODE MTZJ-T-77-5.6C
D972	8-719-983-35	DIODE MTZJ-T-77-33D

< GROUND TERMINAL >

Ref. No.	Part No.	Description
GP301	1-537-770-21	TERMINAL BOARD, GROUND

< IC >

Ref. No.	Part No.	Description
IC301	8-759-571-51	IC M62464FP (MG310AV)
IC302	6-700-261-01	IC BD3861FS
IC303	8-759-909-71	IC BA4558F-E2
IC304	8-759-909-71	IC BA4558F-E2 (MG310AV)
IC306	8-759-932-33	IC BU4066BC (MG310AV)
IC307	8-759-932-33	IC BU4066BC (MG310AV)
IC308	8-759-909-71	IC BA4558F-E2 (MG110)
IC361	8-749-923-04	IC TOTX178A
IC801	6-800-340-01	IC M30622MGA-A68FP (AUS)
IC801	8-759-829-66	IC M30622MGA-A42FP (US, CND)
IC802	8-759-637-58	IC PST592C-T
IC803	6-700-176-01	IC MC74VHCT04ADTR2

MAIN

Ref. No.	Part No.	Description	Remark
IC881	8-759-356-03	IC BA6780	
IC901	8-759-347-18	IC KIA7809PI	
IC902	8-759-646-53	IC KIA7812API	
IC903	8-759-646-54	IC KIA7808API	
IC904	8-759-646-52	IC KIA7805API	
IC905	8-759-646-52	IC KIA7805API	
		< JACK >	
J301	1-815-578-11	PIN JACK (PHONO) 6P (5.1CH INPUT FRONT, REAR, CENTER, SUPER WOOFER) (MG310AV)	
J302	1-815-577-11	PIN JACK (PHONO) 2P (VIDEO IN)	
J303	1-815-576-11	PIN JACK (PHONO) 1P (SUB WOOFER) (MG310AV)	
J304	1-815-574-11	PIN JACK (PHONO) 1P (VIDEO OUT)	
		< SHORT >	
JR301	1-216-864-11	SHORT 0	
		< COIL >	
L301	1-410-517-11	INDUCTOR 47uH (MG310AV)	
L302	1-410-521-11	INDUCTOR 100uH (MG310AV)	
L303	1-410-517-11	INDUCTOR 47uH	
		< TRANSISTOR >	
Q101	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q102	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q112	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q141	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q142	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q201	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q202	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q212	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q232	8-729-905-50	TRANSISTOR DTC343TS (MG310AV)	
Q241	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q242	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q301	8-729-115-30	FET 2SK105ATP-30 (MG110)	
Q333	8-759-068-54	TRANSISTOR KRA102S (MG310AV)	
Q334	8-729-038-67	TRANSISTOR KRC102S (MG310AV)	
Q341	8-759-068-54	TRANSISTOR KRA102S (MG310AV)	
Q342	8-729-038-67	TRANSISTOR KRC102S (MG310AV)	
Q343	8-759-068-54	TRANSISTOR KRA102S (MG310AV)	
Q344	8-729-038-67	TRANSISTOR KRC102S (MG310AV)	
Q350	8-729-038-67	TRANSISTOR KRC102S	
Q351	8-759-068-54	TRANSISTOR KRA102S	
Q352	8-729-212-02	TRANSISTOR KTC3203Y-AT	
Q361	8-729-038-67	TRANSISTOR KRC102S	
Q362	8-729-202-56	TRANSISTOR 2SA950-Y-TPE2	
Q381	8-729-202-56	TRANSISTOR 2SA950-Y-TPE2	
Q382	8-729-038-67	TRANSISTOR KRC102S	
Q383	8-729-202-56	TRANSISTOR 2SA950-Y-TPE2	
Q384	8-729-038-67	TRANSISTOR KRC102S	
Q385	8-729-202-56	TRANSISTOR 2SA950-Y-TPE2	
Q386	8-729-038-67	TRANSISTOR KRC102S	
Q391	8-729-202-56	TRANSISTOR 2SA950-Y-TPE2 (AUS)	
Q392	8-729-038-67	TRANSISTOR KRC102S (AUS)	
Q397	8-729-037-13	TRANSISTOR KTA1271Y-AT	
Q801	8-729-036-89	TRANSISTOR KTC3198GR-A	
Q802	8-729-212-02	TRANSISTOR KTC3203Y-AT	
Q803	8-729-212-02	TRANSISTOR KTC3203Y-AT	
Q881	8-759-068-54	TRANSISTOR KRA102S	
Q882	8-729-038-67	TRANSISTOR KRC102S	
Q883	8-759-068-54	TRANSISTOR KRA102S	
Q884	8-729-038-67	TRANSISTOR KRC102S	
Q885	8-759-068-54	TRANSISTOR KRA102S	
Q886	8-729-038-67	TRANSISTOR KRC102S	
Q887	8-759-068-54	TRANSISTOR KRA102S	
Q888	8-729-038-67	TRANSISTOR KRC102S	
		< RESISTOR >	
R101	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R102	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R103	1-216-845-11	METAL CHIP 100K 5% 1/16W	(MG310AV)
R104	1-216-845-11	METAL CHIP 100K 5% 1/16W	(MG310AV)
R105	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R106	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R107	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R108	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R109	1-216-845-11	METAL CHIP 100K 5% 1/16W	(MG310AV)
R110	1-216-835-11	METAL CHIP 15K 5% 1/16W	(MG310AV)
R111	1-216-835-11	METAL CHIP 15K 5% 1/16W	(MG310AV)
R112	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R113	1-216-845-11	METAL CHIP 100K 5% 1/16W	(MG310AV)
R114	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R115	1-216-845-11	METAL CHIP 100K 5% 1/16W	(MG310AV)
R116	1-216-845-11	METAL CHIP 100K 5% 1/16W	(MG310AV)
R117	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R119	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R120	1-216-835-11	METAL CHIP 15K 5% 1/16W	(MG310AV)
R121	1-216-835-11	METAL CHIP 15K 5% 1/16W	(MG310AV)
R122	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R123	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R124	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R126	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R130	1-216-835-11	METAL CHIP 15K 5% 1/16W	(MG310AV)
R131	1-216-835-11	METAL CHIP 15K 5% 1/16W	(MG310AV)
R141	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R142	1-216-847-11	METAL CHIP 150K 5% 1/16W	
R143	1-216-824-11	RES, CHIP 1.8K 5% 1/16W	
R144	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R145	1-216-854-11	RES, CHIP 560K 5% 1/16W	
R147	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R148	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R171	1-216-841-11	METAL CHIP 47K 5% 1/16W	(MG310AV)
R174	1-216-845-11	METAL CHIP 100K 5% 1/16W	(MG310AV)

MAIN

Ref. No.	Part No.	Description			Remark
R175	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R176	1-216-833-11	METAL CHIP	10K	5%	1/16W (MG310AV)
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R202	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R203	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R204	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R205	1-216-841-11	METAL CHIP	47K	5%	1/16W
R206	1-216-835-11	METAL CHIP	15K	5%	1/16W
R207	1-216-833-11	METAL CHIP	10K	5%	1/16W
R208	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R209	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R210	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R211	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R212	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R213	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R214	1-216-833-11	METAL CHIP	10K	5%	1/16W
R215	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R216	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R217	1-216-837-11	METAL CHIP	22K	5%	1/16W
R219	1-216-821-11	METAL CHIP	1K	5%	1/16W
R220	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R221	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R222	1-216-845-11	METAL CHIP	100K	5%	1/16W
R223	1-216-833-11	METAL CHIP	10K	5%	1/16W
R224	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R226	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R230	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
R231	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R232	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
R233	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R234	1-216-833-11	METAL CHIP	10K	5%	1/16W (MG310AV)
R235	1-216-833-11	METAL CHIP	10K	5%	1/16W (MG310AV)
R236	1-216-820-11	METAL CHIP	820	5%	1/16W (MG310AV)
R237	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)
R240	1-216-809-11	METAL CHIP	100	5%	1/16W
R241	1-216-839-11	METAL CHIP	33K	5%	1/16W
R242	1-216-847-11	METAL CHIP	150K	5%	1/16W
R243	1-216-824-11	RES, CHIP	1.8K	5%	1/16W
R244	1-216-833-11	METAL CHIP	10K	5%	1/16W
R245	1-216-854-11	RES, CHIP	560K	5%	1/16W
R247	1-216-837-11	METAL CHIP	22K	5%	1/16W
R248	1-216-833-11	METAL CHIP	10K	5%	1/16W
R271	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)
R301	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R302	1-216-817-11	METAL CHIP	470	5%	1/16W (MG310AV)
R303	1-216-817-11	METAL CHIP	470	5%	1/16W (MG310AV)
R304	1-216-817-11	METAL CHIP	470	5%	1/16W (MG310AV)
R305	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R306	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R307	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (MG310AV)
R308	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (MG310AV)
R309	1-216-813-11	METAL CHIP	220	5%	1/16W (MG310AV)
R311	1-216-813-11	METAL CHIP	220	5%	1/16W (MG310AV)
R315	1-216-805-11	METAL CHIP	47	5%	1/16W (MG310AV)
R318	1-216-851-11	METAL CHIP	330K	5%	1/16W (MG310AV)
R319	1-216-845-11	METAL CHIP	100K	5%	1/16W
R321	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R322	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R323	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R324	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R325	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG110)
R326	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG110)
R327	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG110)
R328	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG110)
R329	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (MG110)
R330	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (MG110)
R331	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (MG110)
R332	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)
R333	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)
R334	1-216-841-11	METAL CHIP	47K	5%	1/16W
R335	1-216-841-11	METAL CHIP	47K	5%	1/16W
R336	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (MG310AV)
R337	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)
R338	1-216-847-11	METAL CHIP	150K	5%	1/16W (MG310AV)
R339	1-218-296-11	RES-CHIP	75K	5%	1/16W (MG310AV)
R340	1-216-847-11	METAL CHIP	150K	5%	1/16W (MG310AV)
R341	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)

MAIN MAIN AMP

Ref. No.	Part No.	Description			Remark
R342	1-218-296-11	RES-CHIP	75K	5%	1/16W (MG310AV)
R343	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R344	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R345	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (MG110)
R346	1-216-833-11	METAL CHIP	10K	5%	1/16W (MG110)
R347	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (MG310AV)
R350	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R351	1-216-841-11	METAL CHIP	47K	5%	1/16W
R352	1-216-841-11	METAL CHIP	47K	5%	1/16W
R353	1-216-821-11	METAL CHIP	1K	5%	1/16W
R354	1-216-821-11	METAL CHIP	1K	5%	1/16W
R355	1-216-821-11	METAL CHIP	1K	5%	1/16W
R356	1-216-821-11	METAL CHIP	1K	5%	1/16W
R361	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R363	1-216-845-11	METAL CHIP	100K	5%	1/16W
R381	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R382	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R383	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R384	1-216-845-11	METAL CHIP	100K	5%	1/16W
R385	1-216-845-11	METAL CHIP	100K	5%	1/16W
R386	1-216-841-11	METAL CHIP	47K	5%	1/16W
R387	1-216-843-11	METAL CHIP	68K	5%	1/16W
R388	1-216-843-11	METAL CHIP	68K	5%	1/16W
R389	1-216-841-11	METAL CHIP	47K	5%	1/16W
R390	1-216-841-11	METAL CHIP	47K	5%	1/16W
R391	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R392	1-216-825-11	METAL CHEP	2.2K	5%	1/16W (AUS)
R393	1-216-845-11	METAL CHIP	100K	5%	1/16W
R395	1-216-821-11	METAL CHIP	1K	5%	1/16W
R396	1-216-845-11	METAL CHIP	100K	5%	1/16W
R397	1-216-857-11	METAL CHIP	1M	5%	1/16W
R399	1-216-809-11	METAL CHIP	100	5%	1/16W
R801	1-216-833-11	METAL CHIP	10K	5%	1/16W
R802	1-216-809-11	METAL CHIP	100	5%	1/16W
R803	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R804	1-216-841-11	METAL CHIP	47K	5%	1/16W
R805	1-216-841-11	METAL CHIP	47K	5%	1/16W
R806	1-216-833-11	METAL CHIP	10K	5%	1/16W
R807	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R808	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R809	1-216-841-11	METAL CHIP	47K	5%	1/16W
R810	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R811	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R812	1-216-813-11	METAL CHIP	220	5%	1/16W
R813	1-216-811-11	METAL CHIP	150	5%	1/16W
R814	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (MG310AV)
R815	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R816	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (US, CND)
R817	1-216-821-11	METAL CHIP	1K	5%	1/16W
R818	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R819	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R820	1-216-845-11	METAL CHIP	100K	5%	1/16W
R821	1-216-821-11	METAL CHIP	1K	5%	1/16W
R822	1-216-821-11	METAL CHIP	1K	5%	1/16W
R823	1-216-821-11	METAL CHIP	1K	5%	1/16W
R824	1-216-821-11	METAL CHIP	1K	5%	1/16W
R825	1-216-821-11	METAL CHIP	1K	5%	1/16W
R826	1-216-821-11	METAL CHIP	1K	5%	1/16W
R827	1-216-845-11	METAL CHIP	100K	5%	1/16W
R828	1-216-849-11	METAL CHIP	220K	5%	1/16W
R829	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R830	1-216-821-11	METAL CHIP	1K	5%	1/16W
R831	1-216-809-11	METAL CHIP	100	5%	1/16W
R832	1-216-821-11	METAL CHIP	1K	5%	1/16W
R833	1-216-821-11	METAL CHIP	1K	5%	1/16W
R834	1-216-821-11	METAL CHIP	1K	5%	1/16W
R835	1-216-821-11	METAL CHIP	1K	5%	1/16W
R836	1-216-821-11	METAL CHIP	1K	5%	1/16W
R881	1-249-382-11	CARBON	1.2	5%	1/6W
R882	1-249-382-11	CARBON	1.2	5%	1/6W
R883	1-216-833-11	METAL CHIP	10K	5%	1/16W
R884	1-216-833-11	METAL CHIP	10K	5%	1/16W
R885	1-216-833-11	METAL CHIP	10K	5%	1/16W
R886	1-216-845-11	METAL CHIP	100K	5%	1/16W
R887	1-216-845-11	METAL CHIP	100K	5%	1/16W
R971	1-216-813-11	METAL CHIP	220	5%	1/16W
R972	1-216-813-11	METAL CHIP	220	5%	1/16W
R973	1-216-833-11	METAL CHIP	10K	5%	1/16W
R974	1-216-845-11	METAL CHIP	100K	5%	1/16W
R975	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R1325	1-216-845-11	METAL CHIP	100K	5%	1/16W
		< VARIABLE RESISTOR >			
RV301	1-241-765-11	RES, ADJ, CARBON 22K			
		< VIBRATOR >			
X801	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X802	1-781-107-21	VIBRATOR, CERAMIC (16MHz)			
**********					
	A-4476-384-A	MAIN AMP BOARD, COMPLETE (MG310AV: US, CND)			
	A-4476-386-A	MAIN AMP BOARD, COMPLETE (MG110)			
	A-4726-722-A	MAIN AMP BOARD, COMPLETE (AUS)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C500	1-126-947-11	ELECT	47uF	20%	10V
C501	1-104-665-11	ELECT	100uF	20%	10V
C502	1-104-665-11	ELECT	100uF	20%	10V
C503	1-126-953-11	ELECT	2200uF	20%	35V (MG310AV)
C504	1-126-953-11	ELECT	2200uF	20%	35V (MG310AV)
C505	1-130-495-00	MYLAR	0.1uF	5%	50V
C506	1-130-495-00	MYLAR	0.1uF	5%	50V
C507	1-130-495-00	MYLAR	0.1uF	5%	50V

MAIN AMP

Ref. No.	Part No.	Description			Remark
C508	1-130-495-00	MYLAR	0.1uF	5%	50V
C509	1-126-961-11	ELECT	2.2uF	20%	50V
C510	1-164-156-11	CERAMIC CHIP	0.1uF		25V (MG310AV)
C511	1-164-156-11	CERAMIC CHIP	0.1uF		25V (MG310AV)
C512	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C513	1-126-974-11	ELECT	3300uF	20%	50V
C514	1-126-974-11	ELECT	3300uF	20%	50V
C515	1-126-960-11	ELECT	1uF	20%	50V
C517	1-126-968-11	ELECT	100uF	20%	50V
C518	1-126-968-11	ELECT	100uF	20%	50V
C519	1-104-665-11	ELECT	100uF	20%	10V
C520	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C521	1-126-967-11	ELECT	47uF	20%	50V
C522	1-126-967-11	ELECT	47uF	20%	50V
C523	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C524	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C525	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C526	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C527	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C528	1-126-961-11	ELECT	2.2uF	20%	50V
C529	1-126-961-11	ELECT	2.2uF	20%	50V
C530	1-126-961-11	ELECT	2.2uF	20%	50V
C601	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C602	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C603	1-162-962-11	CERAMIC CHIP	470PF	10%	50V (MG310AV)
C604	1-162-962-11	CERAMIC CHIP	470PF	10%	50V (MG310AV)
C605	1-162-960-11	CERAMIC CHIP	220PF	10%	50V (MG310AV)
C606	1-126-967-11	ELECT	47uF	20%	50V (MG310AV)
C607	1-126-967-11	ELECT	47uF	20%	50V (MG310AV)
C608	1-162-960-11	CERAMIC CHIP	220PF	10%	50V (MG310AV)
C612	1-126-948-11	ELECT	100uF	20%	35V (MG310AV)
C613	1-126-948-11	ELECT	100uF	20%	35V (MG310AV)
C616	1-130-495-00	MYLAR	0.1uF	5%	50V (MG310AV)
C617	1-130-495-00	MYLAR	0.1uF	5%	50V (MG310AV)
C618	1-130-495-00	MYLAR	0.1uF	5%	50V (MG310AV)
C619	1-130-495-00	MYLAR	0.1uF	5%	50V (MG310AV)
C620	1-126-961-11	ELECT	2.2uF	20%	50V (MG310AV)
C621	1-162-962-11	CERAMIC CHIP	470PF	10%	50V (MG310AV)
C622	1-126-967-11	ELECT	47uF	20%	50V (MG310AV)
C623	1-162-960-11	CERAMIC CHIP	220PF	10%	50V (MG310AV)
C625	1-130-495-00	MYLAR	0.1uF	5%	50V (MG310AV)
C626	1-130-495-00	MYLAR	0.1uF	5%	50V (MG310AV)

< CONNECTOR >

Ref. No.	Part No.	Description
CN501	1-691-050-21	CONNECTOR, FFC 18P
CN502	1-564-509-11	PLUG, CONNECTOR 6P
* CN503	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P

< DIODE >

Ref. No.	Part No.	Description
D501	8-719-063-79	DIODE 1N4002B (MG310AV)
D502	8-719-063-79	DIODE 1N4002B
D503	8-719-991-33	DIODE 1SS133T-77 (AUS)
D504	8-719-063-79	DIODE 1N4002B (MG310AV)
D507	8-719-084-34	DIODE TSS4B03G (MG310AV)
D508	8-719-991-33	DIODE 1SS133T-77
D509	8-719-991-33	DIODE 1SS133T-77
D510	8-719-991-33	DIODE 1SS133T-77
D511	8-719-084-34	DIODE TSS4B03G
D512	8-719-109-97	DIODE MTZJ-T-77-6.8A
D513	8-719-991-33	DIODE 1SS133T-77
D601	8-719-991-33	DIODE 1SS133T-77 (MG310AV)
D602	8-719-991-33	DIODE 1SS133T-77 (MG310AV)
D603	8-719-991-33	DIODE 1SS133T-77 (MG310AV)

< IC >

Ref. No.	Part No.	Description
IC501	8-749-016-95	IC STK402-100S
IC602	8-749-017-97	IC STK402-240 (MG310AV)

< TERMINAL >

Ref. No.	Part No.	Description
J501	1-694-785-11	TERMINAL BOARD (FRONT SPEAKER IMPEDANCE USE 8Ω) (MG110)
J501	1-694-805-11	TERMINAL BOARD (FRONT SPEAKER IMPEDANCE USE 8Ω, SURROUND SPEAKER REAR (L) IMPEDANCE USE 8Ω) (MG310AV)
J502	1-694-785-11	TERMINAL BOARD (SURROUND SPEAKER REAR (R)/CENTER IMPEDANCE USE 8Ω) (MG310AV)

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q501	8-729-036-77	TRANSISTOR	KRC107M-AT
Q502	8-729-036-77	TRANSISTOR	KRC107M-AT
Q503	8-729-037-34	TRANSISTOR	KRA107M-AT (MG310AV)
Q504	8-729-037-34	TRANSISTOR	KRA107M-AT
Q505	8-729-036-89	TRANSISTOR	KTC3198GR-A
Q506	8-729-036-89	TRANSISTOR	KTC3198GR-A
Q507	8-729-036-89	TRANSISTOR	KTC3198GR-A
Q508	8-729-036-77	TRANSISTOR	KRC107M-AT
Q509	8-729-036-77	TRANSISTOR	KRC107M-AT (MG310AV)
Q510	8-729-036-77	TRANSISTOR	KRC107M-AT
Q511	8-729-036-89	TRANSISTOR	KTC3198GR-A
Q512	8-729-036-89	TRANSISTOR	KTC3198GR-A
Q513	8-729-036-89	TRANSISTOR	KTC3198GR-A
Q514	8-729-037-02	TRANSISTOR	KTA1266Y-AT
Q515	8-729-036-89	TRANSISTOR	KTC3198GR-A
Q516	8-729-037-34	TRANSISTOR	KRA107M-AT
Q517	8-729-920-31	TRANSISTOR	DTC343TK-T-146
Q518	8-729-920-31	TRANSISTOR	DTC343TK-T-146

MAIN AMP

Ref. No.	Part No.	Description			Remark
Q519	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q520	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q521	8-729-038-67	TRANSISTOR	KRC102S		
Q522	8-759-068-54	TRANSISTOR	KRA102S		
Q523	8-759-068-54	TRANSISTOR	KRA102S		
Q524	8-729-038-67	TRANSISTOR	KRC102S		
Q601	8-729-036-89	TRANSISTOR	KTC3198GR-A (MG310AV)		
Q602	8-729-920-31	TRANSISTOR	DTC343TK-T-146		(MG310AV)
Q603	8-729-920-31	TRANSISTOR	DTC343TK-T-146		(MG310AV)
Q604	8-729-036-89	TRANSISTOR	KTC3198GR-A (MG310AV)		
Q605	8-729-036-89	TRANSISTOR	KTC3198GR-A (MG310AV)		
Q606	8-729-036-89	TRANSISTOR	KTC3198GR-A (MG310AV)		
		< RESISTOR >			
R501	1-216-837-11	METAL CHIP	22K	5% 1/16W	
R502	1-216-841-11	METAL CHIP	47K	5% 1/16W	(MG310AV)
R504	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R505	1-216-837-11	METAL CHIP	22K	5% 1/16W	
⚠R506	1-215-891-11	METAL OXIDE	680	5% 2W F	
R507	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R508	1-249-417-11	CARBON	1K	5% 1/4W	
R509	1-249-417-11	CARBON	1K	5% 1/4W	
⚠R510	1-215-891-11	METAL OXIDE	680	5% 2W F	
R511	1-216-837-11	METAL CHIP	22K	5% 1/16W	
R512	1-216-841-11	METAL CHIP	47K	5% 1/16W	(AUS)
R513	1-216-841-11	METAL CHIP	47K	5% 1/16W	(MG310AV)
R514	1-216-841-11	METAL CHIP	47K	5% 1/16W	(MG310AV)
R515	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R516	1-216-841-11	METAL CHIP	47K	5% 1/16W	(AUS)
R518	1-216-841-11	METAL CHIP	47K	5% 1/16W	(AUS)
R519	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R520	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R522	1-216-841-11	METAL CHIP	47K	5% 1/16W	(AUS)
⚠R523	1-215-892-11	METAL OXIDE	1K	5% 2W F	
R524	1-249-401-11	CARBON	47	5% 1/4W	
R525	1-249-401-11	CARBON	47	5% 1/4W	
R526	1-249-401-11	CARBON	47	5% 1/4W	
R527	1-249-401-11	CARBON	47	5% 1/4W	
⚠R528	1-215-892-11	METAL OXIDE	1K	5% 2W F	(MG310AV)
R529	1-216-841-11	METAL CHIP	47K	5% 1/16W	(AUS)
R531	1-216-837-11	METAL CHIP	22K	5% 1/16W	
R532	1-216-837-11	METAL CHIP	22K	5% 1/16W	
R533	1-216-837-11	METAL CHIP	22K	5% 1/16W	(MG310AV)
R534	1-216-837-11	METAL CHIP	22K	5% 1/16W	(MG310AV)
R535	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R536	1-216-845-11	METAL CHIP	100K	5% 1/16W	

Ref. No.	Part No.	Description			Remark
⚠R537	1-215-892-11	METAL OXIDE	1K	5% 2W F	(MG310AV)
R539	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R540	1-216-841-11	METAL CHIP	47K	5% 1/16W	
⚠R542	1-234-499-21	ENCAPSULATED COMPONENT	0.22	5W	
⚠R544	1-234-499-21	ENCAPSULATED COMPONENT	0.22	5W	
R545	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R546	1-216-835-11	METAL CHIP	15K	5% 1/16W	
R547	1-216-835-11	METAL CHIP	15K	5% 1/16W	
R548	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R549	1-216-837-11	METAL CHIP	22K	5% 1/16W	
R550	1-216-845-11	METAL CHIP	100K	5% 1/16W	
⚠R551	1-212-881-11	FUSIBLE	100	5% 1/4W F	
R552	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R553	1-216-841-11	METAL CHIP	47K	5% 1/16W	
⚠R554	1-212-881-11	FUSIBLE	100	5% 1/4W F	
R555	1-249-425-11	CARBON	4.7K	5% 1/4W	
R557	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R558	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R559	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R560	1-249-429-11	CARBON	10K	5% 1/4W	
R561	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R562	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R563	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R564	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R565	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R601	1-249-417-11	CARBON	1K	5% 1/4W	(MG310AV)
R602	1-216-833-11	METAL CHIP	10K	5% 1/16W	(MG310AV)
R603	1-216-833-11	METAL CHIP	10K	5% 1/16W	(MG310AV)
R604	1-249-429-11	CARBON	10K	5% 1/4W	(MG310AV)
R605	1-216-825-11	METAL CHIP	2.2K	5% 1/16W	(MG310AV)
R606	1-216-825-11	METAL CHIP	2.2K	5% 1/16W	(MG310AV)
R607	1-216-821-11	METAL CHIP	1K	5% 1/16W	(MG310AV)
R608	1-216-821-11	METAL CHIP	1K	5% 1/16W	(MG310AV)
R609	1-216-841-11	METAL CHIP	47K	5% 1/16W	(MG310AV)
R610	1-216-841-11	METAL CHIP	47K	5% 1/16W	(MG310AV)
R611	1-249-417-11	CARBON	1K	5% 1/4W	(MG310AV)
R612	1-216-833-11	METAL CHIP	10K	5% 1/16W	(MG310AV)
R613	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	(MG310AV)
R614	1-216-833-11	METAL CHIP	10K	5% 1/16W	(MG310AV)
⚠R615	1-212-881-11	FUSIBLE	100	5% 1/4W F	(MG310AV)
R616	1-216-841-11	METAL CHIP	47K	5% 1/16W	(MG310AV)
R617	1-216-841-11	METAL CHIP	47K	5% 1/16W	(MG310AV)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
⚠R618	1-212-881-11	FUSIBLE	100	5%	1/4W F (MG310AV)
R619	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
R620	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R621	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R622	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
⚠R623	1-233-352-41	ENCAPSULATED COMPONENT	0.22		5W (MG310AV)
R624	1-216-833-11	METAL CHIP	10K	5%	1/16W (MG310AV)
R625	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
⚠R626	1-233-352-41	ENCAPSULATED COMPONENT	0.22		5W (MG310AV)
R627	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R628	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R629	1-249-401-11	CARBON	47	5%	1/4W (MG310AV)
R630	1-249-401-11	CARBON	47	5%	1/4W (MG310AV)
R631	1-249-401-11	CARBON	47	5%	1/4W (MG310AV)
R632	1-249-401-11	CARBON	47	5%	1/4W (MG310AV)
R634	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
R635	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)
R636	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
R638	1-216-841-11	METAL CHIP	47K	5%	1/16W (MG310AV)
R639	1-216-835-11	METAL CHIP	15K	5%	1/16W (MG310AV)
R640	1-216-821-11	METAL CHIP	1K	5%	1/16W (MG310AV)
⚠R642	1-233-352-41	ENCAPSULATED COMPONENT	0.22		5W (MG310AV)
R643	1-216-845-11	METAL CHIP	100K	5%	1/16W (MG310AV)
R644	1-249-401-11	CARBON	47	5%	1/4W (MG310AV)
R645	1-249-401-11	CARBON	47	5%	1/4W (MG310AV)
		< RELAY >			
RY501	1-515-920-11	RELAY (24V)			
RY502	1-515-920-11	RELAY (24V) (MG310AV)			
RY503	1-515-920-11	RELAY (24V) (MG310AV)			
		< THERMISTOR >			
TH501	1-807-796-11	THERMISTOR			

****

Ref. No.	Part No.	Description			Remark
	1-680-803-21	POWER BOARD (MG310AV)			
	1-680-803-31	POWER BOARD (MG110)			
		**********			
	1-533-233-31	HOLDER, FUSE			
	1-535-416-00	TERMINAL			
		< CAPACITOR >			
C901	1-126-968-11	ELECT	100uF	20%	50V
C902	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C903	1-126-767-11	ELECT	1000uF	20%	16V
C911	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C912	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C913	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C914	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
⚠C991	1-113-925-11	CERAMIC	0.01uF	20%	250V
		< DIODE >			
D901	8-719-063-79	DIODE 1N4002B			
D902	8-719-063-79	DIODE 1N4002B			
D911	8-719-991-33	DIODE 1SS133T-77			
D912	8-719-991-33	DIODE 1SS133T-77			
D913	8-719-991-33	DIODE 1SS133T-77			
D914	8-719-991-33	DIODE 1SS133T-77			
		< FUSE >			
⚠F901	1-533-449-11	FUSE, GLASS TUBE (DIA. 5) (2A/125V)			(US, CND)
⚠F901	1-533-468-11	FUSE, GLASS TUBE (DIA. 5) (2A/250V) (AUS)			
⚠F902	1-533-451-11	FUSE, GLASS TUBE (DIA. 5) (3.15/125V)			(US, CND)
⚠F902	1-533-467-11	FUSE, GLASS TUBE (DIA. 5) (1.6A/250V)			(AUS)
		< LINE FILTER >			
⚠LF901	1-402-663-11	TRANSFORMER, LINE FILTER (LFT)			
		< TRANSISTOR >			
Q901	8-729-036-77	TRANSISTOR	KRC107M-AT		
		< RESISTOR >			
⚠R901	1-212-881-11	FUSIBLE	100	5%	1/4W
⚠R902	1-219-237-11	SOLID	3.3M	20%	1/2W (US, CND)
		< RELAY >			
⚠RY901	1-755-332-11	RELAY			
		< TRANSFORMER >			
⚠T901	1-437-287-11	TRANSFORMER, POWER (MG110)			
⚠T901	1-437-288-11	TRANSFORMER, POWER			(MG310AV: US, CND)
⚠T901	1-473-291-11	TRANSFORMER, POWER (AUS)			
⚠T902	1-437-292-11	TRANSFORMER, POWER (US, CND)			
⚠T902	1-437-293-11	TRANSFORMER, POWER (AUS)			

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

RMC **TC**

Ref. No.	Part No.	Description				Remark
	1-680-809-11	RMC BOARD				
		**********				
		< IC >				
IC702	8-759-827-70	IC NJL64H400A-1				
**********						
	A-4476-373-A	TC BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C401	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C402	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C403	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C404	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C405	1-126-923-11	ELECT	220uF	20%	10V	
C406	1-130-486-00	MYLAR	0.018uF	10%	50V	
C408	1-126-947-11	ELECT	47uF	20%	10V	
C409	1-126-963-11	ELECT	4.7uF	20%	50V	
C410	1-126-963-11	ELECT	4.7uF	20%	50V	
C411	1-126-947-11	ELECT	47uF	20%	10V	
C412	1-126-961-11	ELECT	2.2uF	20%	50V	
C414	1-126-947-11	ELECT	47uF	20%	10V	
C415	1-126-947-11	ELECT	47uF	20%	10V	
C416	1-126-963-11	ELECT	4.7uF	20%	50V	
C417	1-126-963-11	ELECT	4.7uF	20%	50V	
C418	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V	
C419	1-162-921-11	CERAMIC CHIP	33PF	5%	50V	
C420	1-162-977-11	CERAMIC CHIP	0.0018uF	10%	50V	
C421	1-115-412-11	CERAMIC CHIP	680PF	5%	25V	
C422	1-126-960-11	ELECT	1uF	20%	50V	
C423	1-126-960-11	ELECT	1uF	20%	50V	
C424	1-126-960-11	ELECT	1uF	20%	50V	
C425	1-126-933-11	ELECT	100uF	20%	16V	
C426	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C427	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C428	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C429	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C430	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C431	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C432	1-130-483-00	MYLAR	0.01uF	5%	50V	
C433	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C434	1-126-947-11	ELECT	47uF	20%	10V	
C435	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C436	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C437	1-126-923-11	ELECT	220uF	20%	10V	
C438	1-130-486-00	MYLAR	0.018uF	10%	50V	
C439	1-126-933-11	ELECT	100uF	20%	16V	
C441	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C442	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C443	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C444	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
		< CONNECTOR >				
CN401	1-695-371-31	CONNECTOR, FFC 10P				

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D401	8-719-991-33	DIODE 1SS133T-77				
		< IC >				
IC401	8-759-242-58	IC TA8189N				
IC402	8-759-143-54	IC uPC1330HA				
		< TRANSISTOR >				
Q401	8-729-212-02	TRANSISTOR	KTC3203Y-AT			
Q402	8-729-037-02	TRANSISTOR	KTA1266Y-AT			
Q403	8-729-038-67	TRANSISTOR	KRC102S			
Q404	8-729-036-89	TRANSISTOR	KTC3198GR-A			
Q405	8-729-036-89	TRANSISTOR	KTC3198GR-A			
		< RESISTOR >				
R401	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R402	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R403	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R404	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R405	1-216-809-11	METAL CHIP	100	5%	1/16W	
R406	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R407	1-216-848-11	METAL CHIP	180K	5%	1/16W	
R408	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R409	1-216-809-11	METAL CHIP	100	5%	1/16W	
R410	1-216-848-11	METAL CHIP	180K	5%	1/16W	
R411	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R412	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R413	1-216-848-11	METAL CHIP	180K	5%	1/16W	
R414	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R415	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R416	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R417	1-216-805-11	METAL CHIP	47	5%	1/16W	
R418	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R419	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R420	1-216-848-11	METAL CHIP	180K	5%	1/16W	
R421	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R422	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R423	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R424	1-216-801-11	METAL CHIP	22	5%	1/16W	
R425	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R426	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R427	1-216-809-11	METAL CHIP	100	5%	1/16W	
R428	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R429	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R430	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R431	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R432	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R433	1-216-805-11	METAL CHIP	47	5%	1/16W	
R434	1-216-803-11	METAL CHIP	33	5%	1/16W	
R435	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R436	1-216-797-11	METAL CHIP	10	5%	1/16W	
R437	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R438	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R439	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R441	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R443	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R444	1-216-819-11	METAL CHIP	680	5%	1/16W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
R445	1-216-819-11	METAL CHIP	680	5%	1/16W
		< TRANSFORMER/COIL >			
T401	1-433-372-11	TRANSFORMER, BIAS OSCILLATION			
T402	1-419-080-11	COIL			
T403	1-419-080-11	COIL			
**********					
	1-680-817-11	T SENSOR BOARD (US, CND)			
	1-680-817-21	T SENSOR BOARD (AUS)			
		**********			
		< PHOTO INTERRUPTER >			
IC11	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC12	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC13	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
		< RESISTOR >			
R891	1-216-820-11	METAL CHIP	820	5%	1/16W
R892	1-216-820-11	METAL CHIP	820	5%	1/16W
R893	1-216-820-11	METAL CHIP	820	5%	1/16W
**********					
		MISCELLANEOUS			
		**********			
4	1-823-005-11	WIRE (FLAT TYPE) (21CORE)			
5	1-823-000-11	WIRE (FLAT TYPE) (18CORE)			
6	1-757-997-11	WIRE (FLAT TYPE) (10CORE)			
7	1-823-001-11	WIRE (FLAT TYPE) (11CORE)			
8	1-823-004-11	WIRE (FLAT TYPE) (17CORE)			
77	1-796-078-11	DECK, MECH			
89	1-757-999-11	WIRE (FLAT TYPE) (13CORE)			
⚠105	1-757-933-11	CORD, POWER (US, CND)			
⚠105	1-823-003-11	CORD, POWER (AUS)			
⚠555	A-3328-818-A	BASE ASSY (KSM-213BFN), OP			
556	1-757-055-11	WIRE, PARALLEL (FFC) (16 CORE)			
M51	A-4735-051-A	MOTOR (60) ASSY (LOADING)			
M52	A-4735-051-A	MOTOR (60) ASSY (TABLE)			
M101	X-2646-110-1	T.T CHASSIS ASSY (MG) (F) (SPINDLE)			
M102	X-2625-769-1	MOTOR GEAR ASSY (MB) (RP) (SLED)			
M391	1-763-697-11	DC FAN (MG310AV: AUS)			
S791	1-692-960-21	SWITCH, PUSH (1 KEY) (CD LID OPEN)			
**********					
		HARDWARE LIST			
		**********			
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
#2	7-685-246-19	SCREW +KTP 3X8 TYPE2 SLIT			
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S			
#4	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S			
#5	7-685-659-71	SCREW +BVTP 4X8 TYPE2 IT-3			
#6	7-682-947-01	SCREW +PSW 3X6			
#7	7-624-106-04	STOP RING 3.0, TYPE -E			
#8	7-627-553-17	SCREW, PRECISION +P 2X2			
#9	7-621-255-32	SCREW +P 2X5			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001.05	• Addition of Canadian and Australian models • Addition of test mode • Addition of electrical adjustments • Ref. No. 82 Shield Plate (MD) is changed to “not supplied”
1.0	2001.03	New

SS-MG110/MG510AV

SERVICE MANUAL

US Model

Ver 1.0 2001.03

Photo: SS-MG510AV

- SS-MG110 is the speaker system in MHC-MG110.
- SS-MG510AV is the speaker system in MHC-MG310AV/MG510AV.

SPECIFICATIONS

[SS-MG110]

Speaker system	3-way, bass-reflex type
Speaker units	
Woofer:	17 cm, cone type
Tweeter:	5 cm, cone type
Super Tweeter:	2 cm, dome type
Nominal impedance	8 ohms
Dimensions (w/h/d)	Approx. 215 × 383 × 223 mm
Mass	Approx. 3.7 kg net per speaker

[SS-MG510AV]

Speaker system	3-way, bass-reflex type magnetically shielded type
Speaker units	
Woofer:	17 cm, cone type
Tweeter:	5 cm, cone type
Super Tweeter:	2 cm, dome type
Nominal impedance	8 ohms
Dimensions (w/h/d)	Approx. 215 × 383 × 258 mm
Mass	Approx. 4.1 kg net per speaker

Design and specifications are subject to change without notice.

PARTS LIST

Ref. No.	Part No.	Description	Remark
	A-4467-065-A	OVERALL ASSY (SS-MG510AV)	
	A-4467-066-A	OVERALL ASSY (SS-MG110)	

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.03	New